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THE ARCHITECTURAL FORUM

FEBRUARY 1921

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THE EDITOR'S FORUM

ARCHITECTS' REGISTRATION

WITH the formation of the National Council of Architectural Registration Boards, there is promise that standardization of requirements for registration may be effected. Of immediate concern is reciprocity between states having license laws, and architects interested in reciprocal transfer can obtain information on the subject by addressing the National Council of Architectural Registration Boards, 3230 W. Monroe St., Chicago.

LEBRUN SCHOLARSHIP AWARD

THE jury in the LeBrun Scholarship Competition for 1920–21, conducted by the New York Chapter A.I.A., has made these awards:

Traveling Scholar	Oliver Reagan, New York.
First Honorable Mention	Robbins L. Conn, New York.
Second Honorable Mention	Edward S. Lacosta, New York.
Third Honorable Mention	Charles J. Irwin, Brooklyn.

A.I.A. EDUCATION FUND

THE following announcement of a gift to the Institute for architectural education was recently made to the President and Board of Directors.

"The undersigned is privileged to say that a friend of the profession desires through the Institute to make a contribution to architecture. His wish is to add some encouragement to young architects in pursuing the long and arduous training necessary to prepare them for successful practice. The donor proposes to give to the Institute in installments a sum amounting to $25,000 which shall be known as an education fund, the income of which shall be used at the will of the Institute for the benefit of the profession of architecture. The giver suggests that the Board of Directors at its present meeting appoint a committee which shall under the direction of the Board and in co-operation with the American School at Rome, establish and administer one or more traveling scholarships for which $1,500 per year will be made available."

PARIS ARCHITECTURAL EXHIBIT

BY invitation of the Société des Artistes Français, of which M. Laloux is President, and in collaboration with the French Department of Fine Arts, there will be held an exhibition of American Architecture in the Salon des Artistes Français, in Paris, opening May 1 and lasting about two months.

Architects desiring to exhibit drawings or photographs are requested to communicate with Mr. Julian Clarence Levi, Secretary of the Committee, 105 West 40th street, New York.

BOOK NOTES

THE HANDBOOK OF ARCHITECTURAL PRACTICE

AN exceedingly valuable contribution to the working library of the architect is "The Handbook on Architectural Practice," newly published by the American Institute of Architects, Octagon House, Washington, D. C. As announced in the preface, this book does not aspire to treat of architecture as an art, nor does it deal with construction, engineering or the choice of materials. We may quote here its interesting and important purpose:

"The architect, by expressing his ideas in forms and words of exact contractual significance, by controlling machinery for their embodiment, by giving just decisions between conflicting interests, by bearing himself as worthy of his high calling, gives to his art the status of a profession. It is with that aspect of the architect's work, professional practice and its servant, business administration, that this handbook is concerned."

Chapters are published on these various subjects:

I — *The Architect and the Owner*
Treating of the forms of architectural service; methods of payment; agreement between owner and architect; employment of engineers; the owner's duties and other important business phases of this relationship.

II — *The Architect's Office*
An outline of office organization, plan and equipment, with information on cost accounting and bookkeeping.

III — *Surveys, Preliminary Studies and Estimates, Working Drawings and Specifications*

IV — *The Letting of Contracts*
Important and interesting information and opinions are here given regarding the fee plus cost contract and the separate contract system.

V — *The Execution of the Work*
Information on notifications; progress and value schedules; superintendence; changes in contract amounts; applications for payment and certificates of payment.

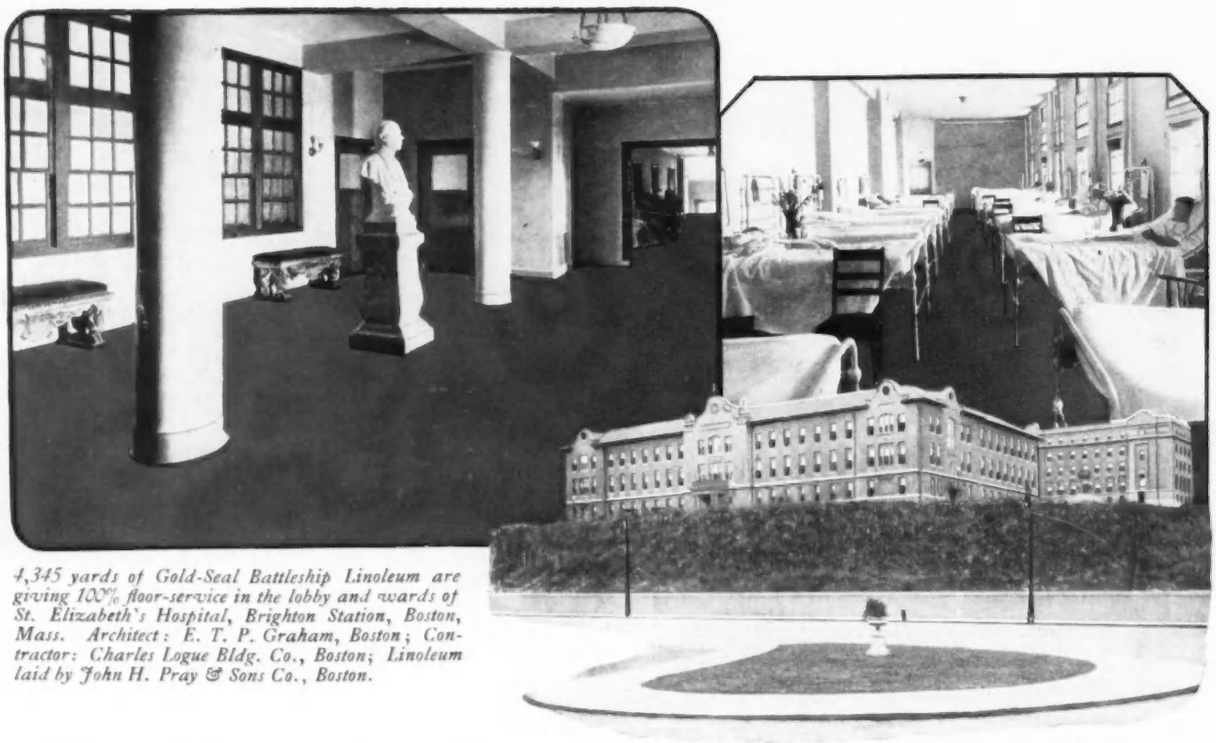
VI — *The Architect and the Law*
License to practice; service agreements; liability to owner, contractor and others, and to know the law; mechanics' lien laws, partnership agreements and other important legal points.

VII — *Documents of the American Institute of Architects*
A complete presentation of a number of standard forms of documents developed after careful investigation by the Institute.

While it is true that business administration is a servant of professional activity it is equally true that many architects have failed to take proper advantage of this service. Consequently, avoidable misunderstandings have arisen and disappointment on the part of the owner or the architect has developed. The information given regarding the business relationship of the architect and the owner, defining clean-cut methods of developing mutual confidence and understanding before and during the course of the work, is consequently of direct value.

Stress is laid on the importance of preliminary estimates and suggestions are made as to methods of close approximation. The subject of quantity surveying is discussed in detail. We are particularly interested in finding in Chapter 23 a timely discussion of the "straight" and "fee plus cost" forms of contract.

The handbook is dedicated "To the memory of Frank Miles Day, of Philadelphia, under whose constructive and able leadership this handbook was undertaken and written and whose untimely death prevented him from carrying it to completion."



4,345 yards of Gold-Seal Battleship Linoleum are giving 100% floor-service in the lobby and wards of St. Elizabeth's Hospital, Brighton Station, Boston, Mass. Architect: E. T. P. Graham, Boston; Contractor: Charles Logue Bldg. Co., Boston; Linoleum laid by John H. Pray & Sons Co., Boston.

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The fact that *Gold-Seal* Battleship Linoleum overtops the rigid standards of the U. S. Navy, and the added factor of the unequivocal Gold-Seal Guarantee, makes it a certain investment in floor-covering satisfaction.

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"Impressions of the Colonial Architecture of Mexico"

CHURCH DOME, VIRGIN DEL CARMEN
SAN LUIS POTOSI, MEXICO

The
ARCHITECTURAL
FORUM

VOLUME XXXIV FEBRUARY 1921 NUMBER 2

Impressions of the Colonial Architecture of Mexico

PART I

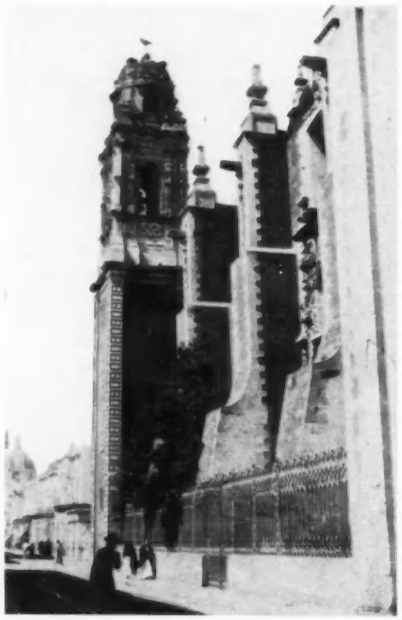
By WALTER H. KILHAM

THE south bound train jogs briskly along over a yellow, cactus-sprinkled plain which in the distance sweeps up in vast dull green stretches to a range of towering and jagged mountains, gashed by enormous canyons and circled with floating clouds. Half a mile ahead, intermittently visible around the long curves of the track, is the little train of soldiers—two box cars and an engine—loaded with ragged *Constitucionalistas*, a little short of shoes and uniforms, but long on well filled ammunition belts, who are supposed to protect us from the quite possible raids of the irrepressible roving bandits of the country. Here and there along the track are the adobe or brush-built huts of the native folk, populous with liquid-eyed, brown cherubs, one room for everybody, with possibly an annex for the donkey, and topped with rows of bright orange gourds and squashes. Perhaps in the middle distance a slender, tiled bell tower rises over the white buildings of a *hacienda*, half sunk in masses of green foliage. The stainless sky of perfect azure arches overhead. There is an impression of space and freshness—an almost virgin country ready for exploration and development. Suddenly, as the train rounds a small rise of ground, a magical change of scene is disclosed. Spread closely along a narrow valley lie the huddled pink and blue houses of a populous, old world city. Across one end stride the massive arches of a great aqueduct, while above it, easily dominating the surprising picture, rise the mighty buttresses and domes of an ancient cathedral—massive, timestained and arrogant, defying the inquisitive stare of the Yankee traveler with its air of confident and domineering supremacy. Such, in a paragraph, is a composite impression of Mexico in 1919—a land of dramatic contrasts of old and new, of savagery and civilization, not separated by hundreds of miles, but closely mixed together, the cultivated Latin and the ignorant Indian jostling each other whether in crowded market places or on far spreading plains.

Chapel at Amecameca

Americans who have come to regard Mexico as peopled wholly by roving bands of bandit horsemen, its towns mere collections of adobe huts, without institutions, traditions or history, would do well to remember that while the colonies of Virginia and Massachusetts Bay were nothing but straggling groups of rude log cabins, whose people passed their time in a bare struggle for existence, the royal province of Mexico had been in existence for a good

century, and its cities already contained splendid palaces, magnificent churches, colleges, aqueducts and bridges of solid masonry, while the arts of printing, metal working, bell founding and others had long been advanced to a high state of perfection. The Spanish invaders, who effected their conquest in 1519–20, immediately began a systematic colonizing scheme which, like all Spanish colonization, was a model of its particular kind. Ship after ship brought scores and hundreds not only of priests and soldiers, but architects, engineers and skilled artisans of every sort who, utilizing the abundance of native labor which was at hand, razed the cities of the Aztecs and on their ruins began the mighty structures which are now the wonder of every visitor to the Republic of Mexico.



Tower and Buttresses, Mexico City

As has been the case only too often in other places, the country's wealth has been the fateful cause of most of its own misery. Those who deride Mexico's unhappy plight today, free and independent for a century without having ever been able to establish a stable government or take an honored place in the family of nations, ought to remember that never, from the days of Cortez to the present, have any considerable number of foreigners entered Mexico with the idea of helping the country even to the simple extent of becoming useful and industrious citizens; whether the invaders were Spanish, French or American, the basic object was the exploitation of the nation's natural resources of whatever product was most coveted at the moment. Any visitor to a strange land brings away about what he takes in, and one who goes to Mexico for the purpose of enjoying the many delightful features of the country, instead of criticising its institutions, will find much that is pleasing and indeed worthy of imitation, while the architect, with his mind trained to the reception of the pic-

Portal of Cathedral, Mexico City

Church of Vera Cruz, Mexico City

torial and beautiful, will find the country a veritable treasury of brilliant color, exuberant detail, and noble outline and mass.

For a day previous to reaching the frontier the south bound traveler is treated to a panorama of the dejected streets of Arkansas villages, deep in mud, the promenade of inquisitive brown spotted hogs, and the cheap frame shacks of Texas prairie towns—some right side up on their legitimate foundations and others upside down in the distance, wherever they may have been deposited by the playful breezes of the southwest. Once across the river, however, even the rather disreputable border town of Nuevo Laredo is at least built of solid masonry and encloses in its midst a clean, well kept and much used park with the inevitable Mexican tin band stand which even so discriminating a visitor as Flandrau admits one eventually begins to like.

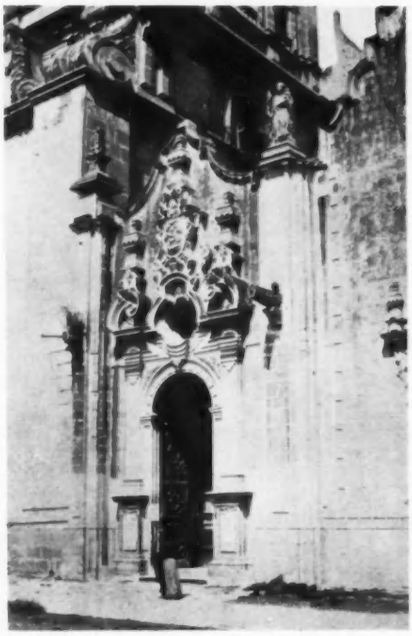
Cathedral Dome and Transept

The intent of this article, as requested by the Editor, was to adhere closely to the technical discussion of Mexican architecture during the viceregal period, but no one with any temperament at all can succeed in keeping the architecture, scenery and people of Mexico entirely separated. Mexico is essentially a pictorial country, not picturesque—for I abhor that word—but a place where everything at all times composes itself into a picture, frequently, perhaps, a chromo with a good deal of "jazz" in the coloring, but still a picture, and even if the inimitable Flandrau says that everybody in the republic looked to him at first like a homemade cigar, he himself immediately admitted that among all classes of Mexicans there is an extraordinary amount of beauty which forms an intensely diverting adjunct to the architecture. For Mexico has a real architecture which is well worth investigation and which, with the now realized advent of peace, must soon become a

Cathedral and Sagrario, Mexico City

favorite study for American architects and designers.

The architecture of the colonial period in Mexico, as might be expected, derives its general style from that of the corresponding period in Spain, the mother country, and in some notable examples follows precedent very closely. The salient features of Spanish renaissance work are in general the sharp, even theatrical, contrast of highly enriched areas with broad expanses of absolutely plain surfaces, and the enclosing of the enrichment around doorways within definite and well defined boundaries. Both of these features are undoubtedly the result of the Moorish influence in Spain, and both were transferred to Mexico in their entirety. The churches and palaces of the new provinces also inherited in full measure the strongly dominating effect of the churches of the old country, combined with a sort of swaggering expression which, in the palaces especially, replaces the cheerful, domestic aspect of a French or English manor house. In fact, the feeling of confidence and strength is everywhere apparent in this early work. Even among all the intricacies of the most rococo designs, the mouldings are firm in scale—never weak or uncertain—and the carving is brilliant and strong. The *cimborio* of the Spanish church develops in Mexico into the dome which, in its half-orange form, was multiplied over the crossings of churches in astonishing numbers. These domes are built of solid masonry, and usually topped with lanterns and charmingly decorated with windows and buttresses. So numerous are they that one begins to think that the builders must have experienced a real pleasure in their construction and preferred them to any other form of roofing. The old church of Atzcapotzalco, for example, has five domes of large size besides various small ones, and this church is not an exception in any sense. From plain and massive bases rise the great church towers, topped with highly enriched belfries, packed with ancient and melodious bells, and capped with little domes of blue and yellow tiles. The decoration of buildings by tiles is peculiarly Mexican and is a beautiful feature which would merit a chapter by itself. The art of manufacturing glazed tiles and faience was brought to Puebla by potters from Talavera in Spain and carried to a high degree of perfection. The blue, yellow and white tiles were used for the coverings of domes, towers and walls of buildings with indescribably charming results which no photograph can reproduce. Even so little known a building as the *Casa de los Azulejos* in Mexico City well deserves to be the subject of an architectural monograph, although its delicate coloring is inimitable by modern "quantity production" methods.

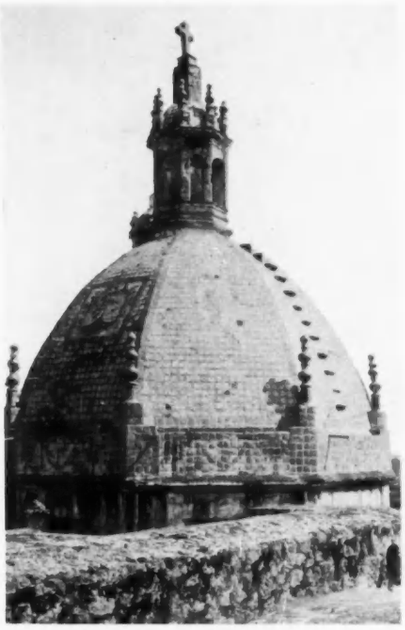


Doorway of Sagrario, Mexico City

The dry vocabulary of technical description fails when one comes to the question of the carved

Tiled Domes from the Roof Tops, San Angel

church fronts and palace portals which exist in great profusion. It is true that a family likeness runs through all, that the eye eventually tires of the curls and twists of the mouldings and the eternal corkscrew columns and frequently crude details of the niches and arches which decorate the facades, the offspring of the baroque and Churrigueresque fantasies of old Spain; one begins to formulate lines about "crooked architecture for crooked people" and to draw hasty conclusions as to the morality of the originators of these sinuous designs. But one quickly perceives that the detail of the doorway is only a small part of the picture. The massive buttresses of severest simplicity rise grandly on either side, colored in the most delicate tones of pink and yellow, their plain surfaces contrasting with and emphasizing the enrichment of the center; the ancient stone pavement leads to a richly carved door which alone would repay a day's study; adjoining may be a spacious old arcade or ancient garden wall topped by cypresses three centuries old.



Dome and Lantern, San Angel

The peaceful tide of semi-Indian traffic flows quietly along the narrow street, perhaps to a carved fountain which was flowing when New York was not even a trading post, and any article made of stone, except perhaps an Indian battle axe, would have been non-existent in the English colonies. It is difficult to realize Mexico's age.

The old Spanish architects were strong on line and proportion, and their construction was of the best, but color everywhere becomes the keynote of their work. This color, fresh, brilliant and sparkling in the crystalline air, may be intentional, as in the domes of glazed tiles at San Angel and the walls of tender pink *tezontle* at Guadalupe Hidalgo, or it may be accidental, as in the stucco facade of the old church of Xochimilco, where an undertone of lemon yellow is overlaid by a later tone of most delicate pink, mellowed and seasoned by the weather. Even the peons have a strong eye for color which they manifest, when possible, in their surprising combinations of costume; if they are unable to acquire a magenta scarf or a pair of yellow drawers to wear outside their trousers they will make up for it by carrying a basket of oranges or ripe tomatoes; at any event the color is there in some form.

The most important and probably the best known ecclesiastical building in the country is the cathedral of Mexico City whose size alone (length of inside walls 387 feet, width 177 feet, height 179 feet) entitles it to rank with churches of the first order, and as a matter of fact I think that the style and dignity of its main facade are easily able to qualify it as one of the finest renaissance churches in the world. One may quibble at the great inverted consoles which surmount the buttresses and possibly at the lack of simplicity in the lower portions, but all such minor defects are more than balanced by the two magnificent towers which are not only finely proportioned but convey a certain subtle impression of the spirit of Latin America, which differentiates them from all others. The design of the belfries is most unusual, an octagonal chamber enclosed within a square pavilion-like structure, and is very successfully treated; on days of ceremonial, when a mammoth red, white and green national flag is hoisted on the flagstaff between the yellow masses of the two towers, its drooping folds lazily swaying in the wind against the clear blue sky above the busy square, the effect is as fine as anything I know

Domes, Lanterns and Towers

of anywhere. The interior is rather cold in color, with a glaring light from the high windows of plain glass, but there are several altars of blazing gold and the vista from one of the aisles through the alternating lights and shadows of the passage to the adjoining *Sagrario Metropolitano*, with its groups of black clad worshipers, is pictorial in the highest degree. As in most Mexican churches, the bells with their peculiar hanging are a prominent feature and in this case they are mechanically remarkable, for the largest is 16½ feet high, weighs 27,000 pounds, and was cast in the suburb of Tacubaya in 1792. Its "grave, sweet, and penetrating tones" (Terry) float above the roofs of the city to a long distance.

The Bells of San Angel

The church interiors are apt to be disappointing, for although they are generally carried out in honest and massive masonry, and are frequently well proportioned, the walls are so often covered with rather cheap and gaudy frescoes that much of their good effect is lost; they are redeemed to some extent by the color and heavy gold leaf of the carved wooden rococo *retablos* which succeed in conveying a certain imposing idea of barbaric splendor which is doubtless highly impressive to the simple peon worshipers. Many of the details of ornament in the Mexican churches can hardly be called masterpieces, but depend for their effectiveness chiefly upon excellence of scale, boldness of execution and what might be called their general suitability to the purposes for which they were made. That in design and execution they often fall far short of what would satisfy a discriminating architect today was proved not long ago when one of these Mexican *retablos* from a dismantled church was offered at auction in New York. Huge sections of roughly carved and rather gaudily colored wood exposed amid the dust and debris of an auction room lost much of the impressive splendor which they doubtless had in the original setting.

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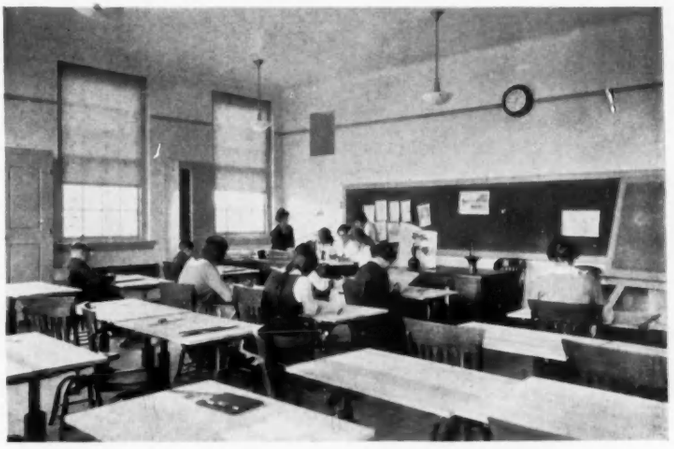
City Hall and Cathedral, San Luis Potosi

Tower Hill School, Wilmington, Del.

BROWN & WHITESIDE, ARCHITECTS

IN the designing and planning of a private school an architect is not restricted or limited by many of the considerations which often affect the planning of a public school. The funds for the construction of a private school are usually provided by individuals or supplied by school associations, so that they do not come from the public revenue, and there is not often the resulting necessity for rigid economy which is sometimes so misapplied that much crippling and handicapping of otherwise free and intelligent solutions result. A private school is generally planned to accommodate no more than a given number of pupils and therefore the architect need not consider the necessity of turning to account, for the actual use of pupils, every available foot of area within the building, which is often necessary in the overcrowded condition of the public schools. Designing a private school, therefore, offers an opportunity much broader than is apt to be afforded in planning a public school of any kind.



Art Room over Master's Office

The Tower Hill School was designed to provide for 500 pupils and when it was opened about half that number were in attendance. It is a day school and therefore many of the problems met in the planning of residence or boarding schools were not considered. The building, with its furnishings and equipment, was the gift of several donors and it was their desire that the school be complete in every respect and that without the sacrifice of anything in the way of utility the building should possess distinct architectural merit and be such as would favorably impress the pupils at ages when ideas and standards of values are usually formed.

The buildings, which occupy a plot of considerable area, constitute a group of three structures—a central building of two stories and two one-story pavilions which are connected with the main structure by corridors or enclosed arcades. One of these pavilions contains the kindergarten while in the other is the assembly room or auditorium. The semi-isolation of these two buildings from the main structure makes possible their being operated independently and removes two possible sources of disturbance to the rest of the school life. Piano recitals, lectures or moving picture performances may be given in the auditorium without in any way causing interruption to the general routine.

East Arcade Looking toward Kindergarten

In the central or main building there are 9 class rooms, library, gymnasium, chemical and physical laboratories, study rooms for elementary and high school work, instructors' retiring rooms and first aid department, together with rooms for special courses such as model kitchens, domestic science laboratory, practice dining room, manual training room and refectory, and such utilities as laundry, kitchen, heating plant and refrigeration rooms. One part of the manual training room, which contains moving machinery, is shut off from the rest of the department and the refectory, where luncheon is served

Manual Training Room in Basement

daily on the self service or cafeteria plan, is managed by the domestic service department.

The wisdom of placing certain rooms of school buildings in basement portions which are necessarily at least partially below grade is a question upon which much might be written, but it may be observed here that the decision in such an instance should never be made without duly considering all the values at stake. Where such rooms would be badly lighted and insufficiently ventilated use of basement space would obviously be a mistake, but in this instance it has been found entirely practicable to place here such rooms as domestic science laboratory, manual training department, laundry and the kitchen, practice dining room and refectory with their various offices. The ground upon which these school buildings have been constructed falls abruptly in such a way that large windows and areaways of considerable width on one side of the buildings have made possible the use of such space in the basement.

The planning of the school has been done with the idea of securing the utmost in the way of convenience, both as to arrangement and equipment. The buildings are so grouped that the kindergarten, with three sides exposed, receives sunshine almost all day while the class rooms receive the sun throughout at least a large part of the school day; no shadows can be cast upon walls through which light enters the class rooms. Apparatus for heating and ventilating has been carefully planned and the type of windows used for the class rooms is such that they afford either the minimum or the maximum amount of outdoor opening. This type of window was found to be fairly expensive but it was thought advisable to install them as giving the widest flexibility in the way of lighting and ventilation and providing direct ventilation in seasons when the entire heating and ventilating systems would not be in use. Vacuum cleaners have proved to be advantageous and economical.

Due provision has been made for such details as electric illumination and electric power in the manual training rooms and mechanical plant. Program clocks, operated from the headmaster's office, are installed and a complete inter-communicating telephone system, operated from a switchboard at the information desk, brings the various departments into close touch.

In design the buildings follow what might be called the sentiment and feeling of the later English renaissance and they possess a high degree of scholastic merit and architectural consistency. The exterior walls are of brick laid up in Flemish bond and trimmed with limestone. The buildings, with the exceptions of doors, door trim, panel work in some rooms and wood floors in certain instances, are of non-combustible materials. Foundation walls below grade are of concrete, floors are of combination tile and reinforced concrete and the partitions are of tile.

The covering of floors throughout the building has been given particular attention. For certain rooms, such as auditorium, kindergarten, gymnasium, and in some other instances, wood floors seemed to be both necessary and desirable. Other rooms, and the corridors throughout, are floored with American quarry tile and sanitary bases of this material are placed around all the class rooms, where a linoleum tile floor is laid. This treatment, while fairly expensive, has been found to be practical for it is readily cleaned, practically noiseless and its color and design add to the attractiveness of the class rooms. Glass slides are used on furniture to prevent scarring the linoleum.

View in Kindergarten Wing

DETAIL OF MAIN FACADE

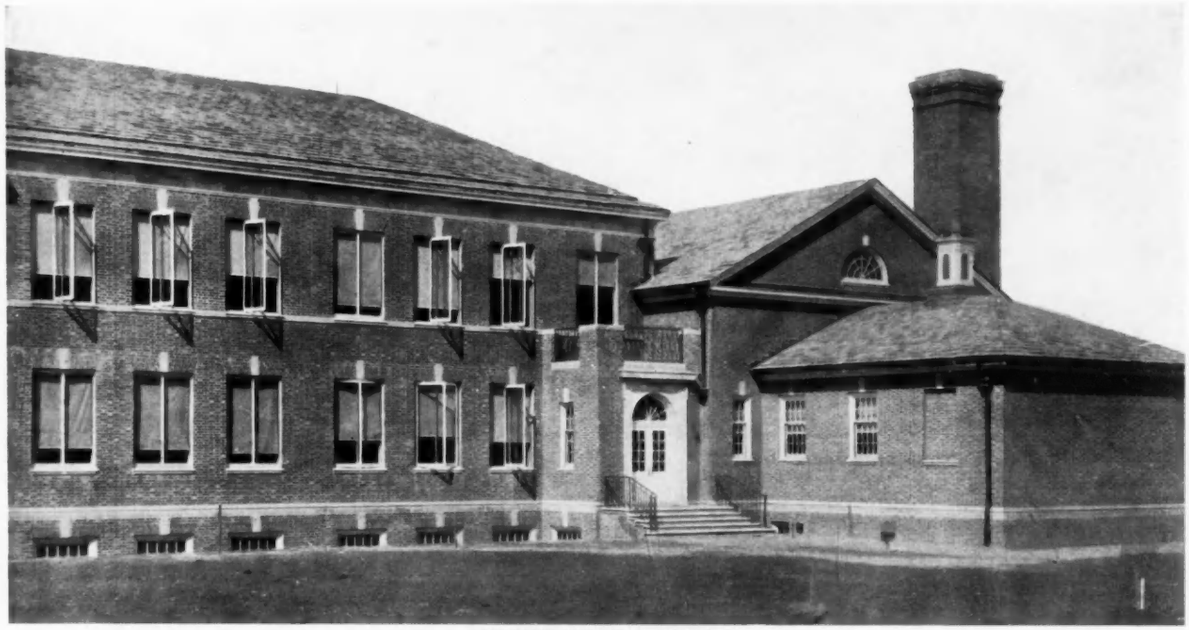
TOWER HILL SCHOOL, WILMINGTON, DELAWARE

BROWN & WHITESIDE, ARCHITECTS

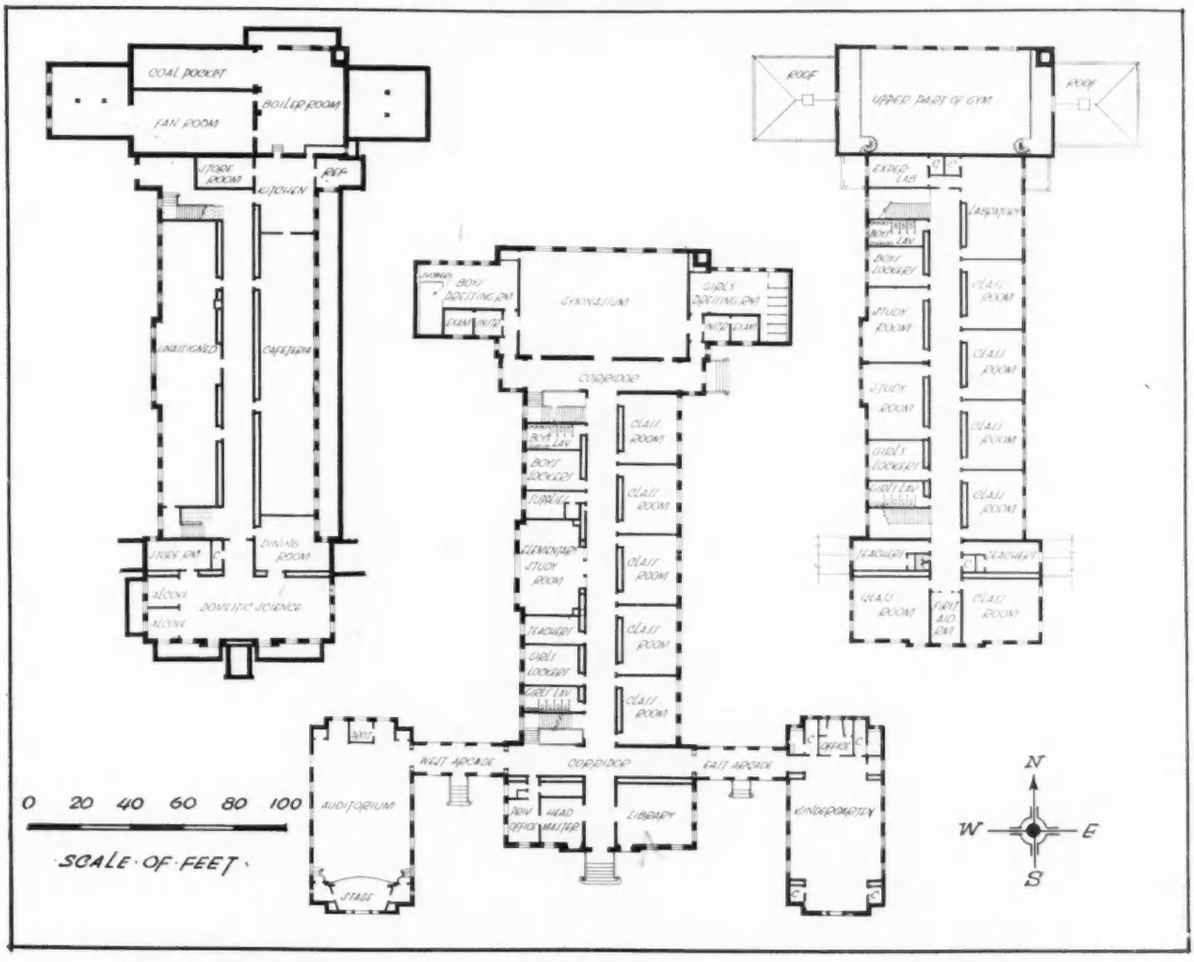
GENERAL VIEW

TOWER HILL SCHOOL, WILMINGTON, DELAWARE

BROWN & WHITESIDE, ARCHITECTS



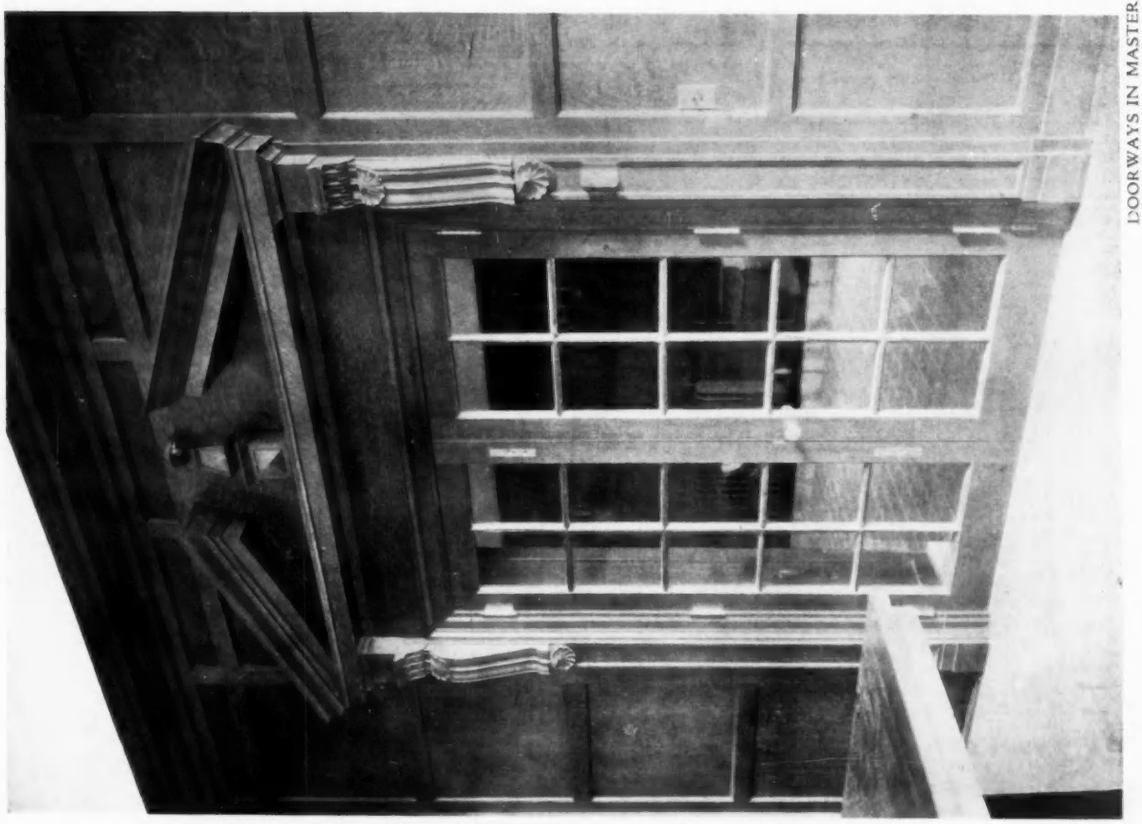
SIDE OF CENTRAL BLOCK



BASEMENT PLAN FIRST FLOOR PLAN SECOND FLOOR PLAN

TOWER HILL SCHOOL, WILMINGTON, DELAWARE

BROWN & WHITESIDE, ARCHITECTS



DOORWAYS IN MASTER'S OFFICE AND LIBRARY

TOWER HILL SCHOOL, WILMINGTON, DELAWARE

BROWN & WHITESIDE, ARCHITECTS

MEMORIAL TABLET TO JOHN PIERPONT MORGAN

ERECTED BY TRUSTEES IN THE METROPOLITAN MUSEUM, NEW YORK, N. Y

PAUL MANSHIP, SCULPTOR

Early American Domestic Architecture

V. THE SIR WILLIAM JOHNSON HOUSE, FORT JOHNSON, N. Y.

MEASURED DRAWINGS BY WM. D. FOSTER AND LEWIS E. WELSH

WEST of Amsterdam, New York, on the Mohawk turnpike and at the edge of the Mohawk River, stands the house built by Sir William Johnson in 1742.

This fine old dwelling of gray stone is very impressive amid its surrounding trees. The entrance porch which is very fine in proportion and detail makes a center of interest as one views the simple façade. The roof which is now of slate was originally of lead but this was removed during the revolution to be made into bullets. The rather unusual and very English dormers are original. The muntins and sash are noticeably wide but are in excellent keeping with the stone walls.

The decorative interest of the exterior is centered at the main doorway with its portico. Classic columns support an open pediment the ornamented frieze of which is continued within the portico and across the top of the doorway itself. There is no transom and the door, like the windows of the house, is fitted with heavy paneled wooden shutters.

The rear of the building is extremely satisfying with its stone wall broken by only four openings.

The plan is simple: a central hall is flanked by the living room and what may have been an "office" on one side and by the dining room and kitchen on the other. Upstairs are the usual four rooms while the attic remains unfinished and open to the ridge, there being no extra floor as the higher dormer would seem to suggest.

The living room is particularly dignified with its fine mantel and four paneled walls. The trim around the doors in this room and in the hall is worthy of notice with the unusual added mould outside the regular trim. The dining room is less formal; the walls are papered and the only feature in the room is the well proportioned mantel.

The house is in unusually good repair, without having been "restored." It was purchased by the late General De Peyster of New York and presented to the Montgomery County Historical Society. This Society has re-furnished the place as nearly as possible in the fashion of the days when it was occupied by Sir William Johnson and described in correspondence which he had with his architect and decorator. From this correspondence it is learned that the paneling was made in England and the window sash and glass in France.

FRONT · ELEVATION

SCALE · 1/8" EQUALS · 1'-0"

MAIN · CORNICE

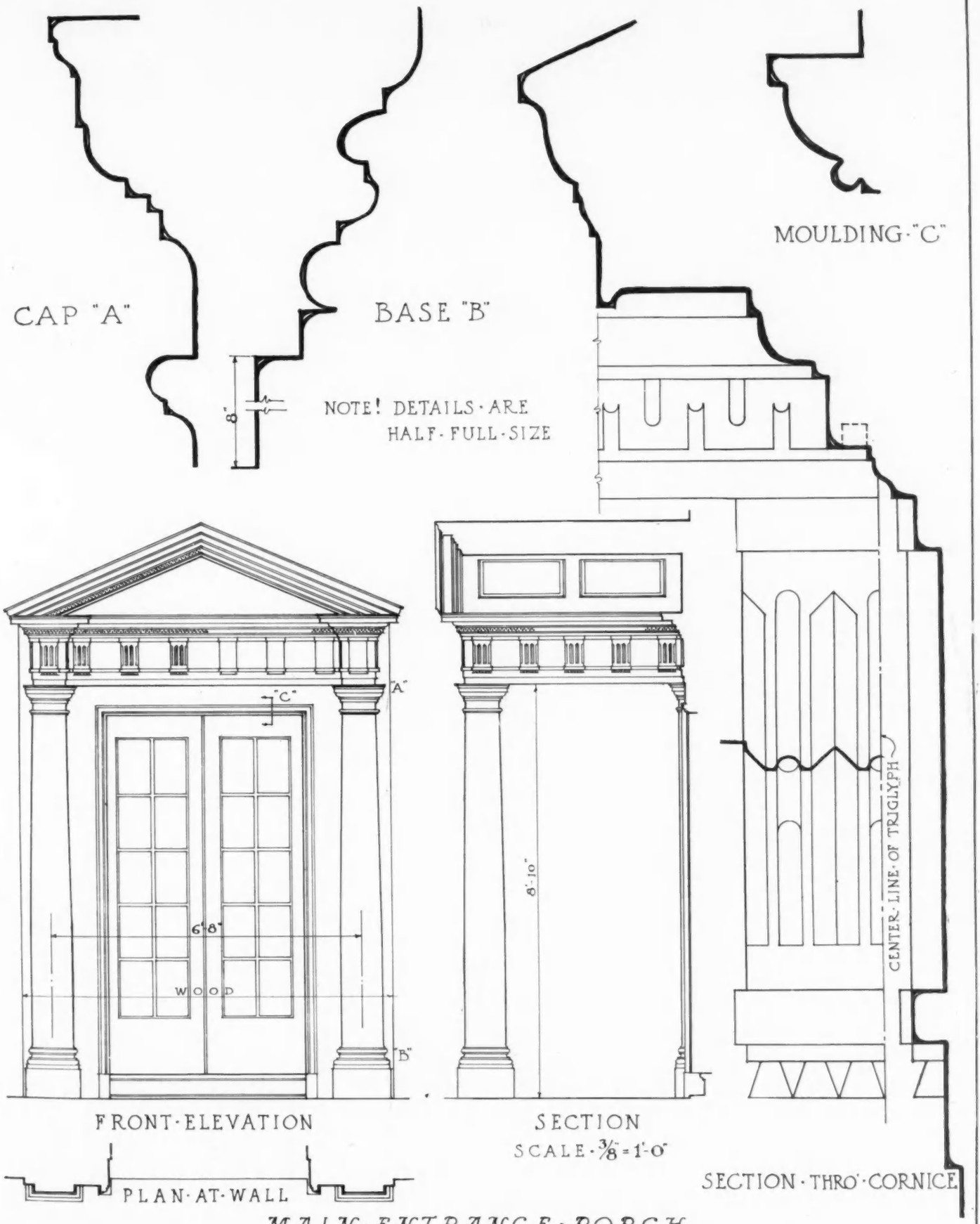
DETAILS · ARE · ONE · QUARTER FULL · SIZE

WINDOW · JAMB EXTERIOR

EARLY · AMERICAN · DOMESTIC · ARCHITECTURE · · · 1920 ·

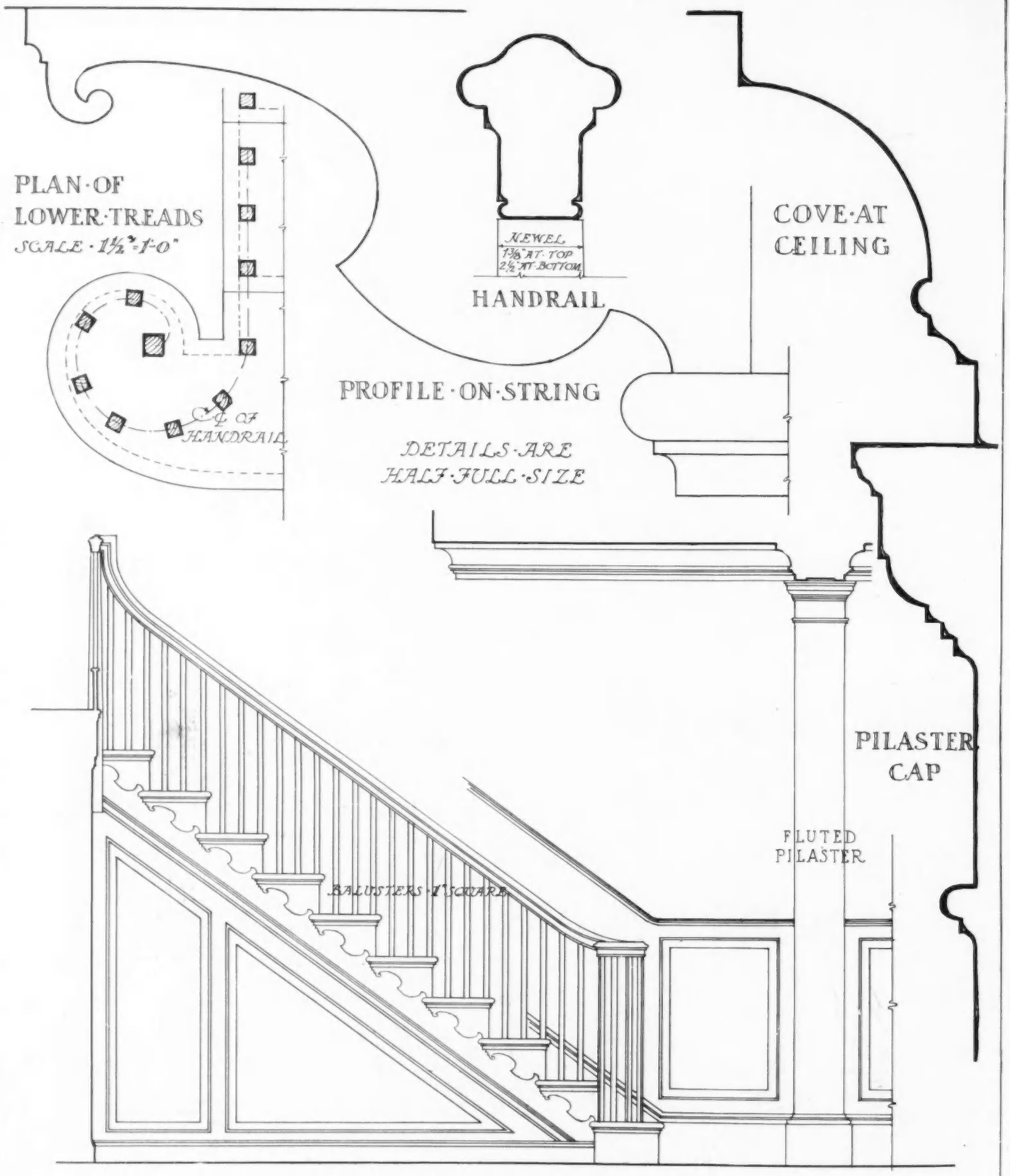
SIR · WILLIAM · JOHNSON · HOUSE
FORT · JOHNSON · N · Y ·

MEASURED · AND · DRAWN BY · WM · D · FOSTER · · · AND · LEWIS · E · WELSH ·



MAIN · ENTRANCE · PORCH

EARLY · AMERICAN · DOMESTIC · ARCHITECTURE · · · 1920 ·	SIR · WILLIAM · JOHNSON · HOUSE FORT · JOHNSON · N · Y ·	MEASURED · AND · DRAWN BY · WM · D · FOSTER · · · AND · LEWIS · E · WELSH ·



MAIN·STAIRCASE

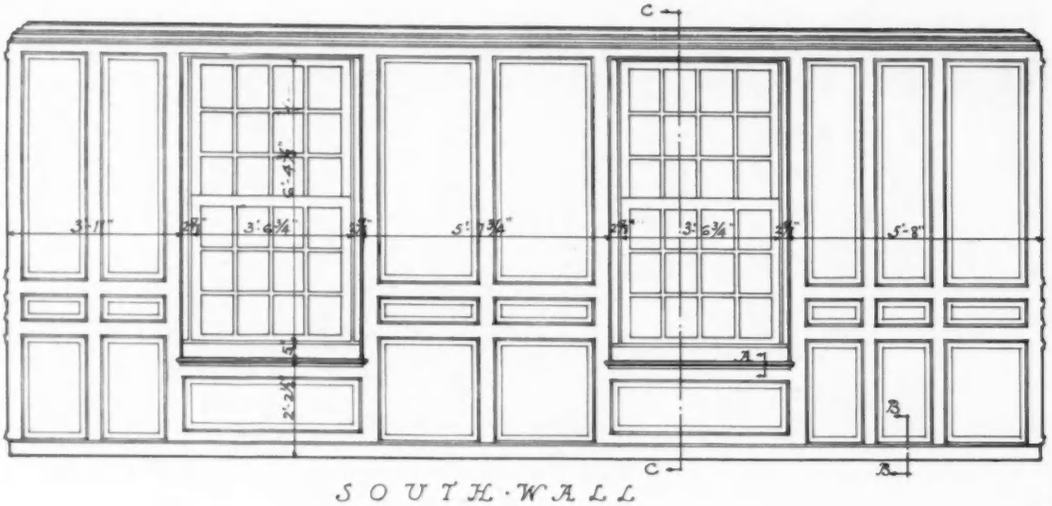
SCALE·½"=1'-0"

EARLY·AMERICAN DOMESTIC·ARCHITECTURE ··· 1920	SIR·WILLIAM·JOHNSON·HOUSE FORT·JOHNSON·N·Y·	MEASURED·AND·DRAWN BY·WM·D·FOSTER·· AND·LEWIS·E·WELSH

ENTRANCE DOOR

MAIN STAIRWAY

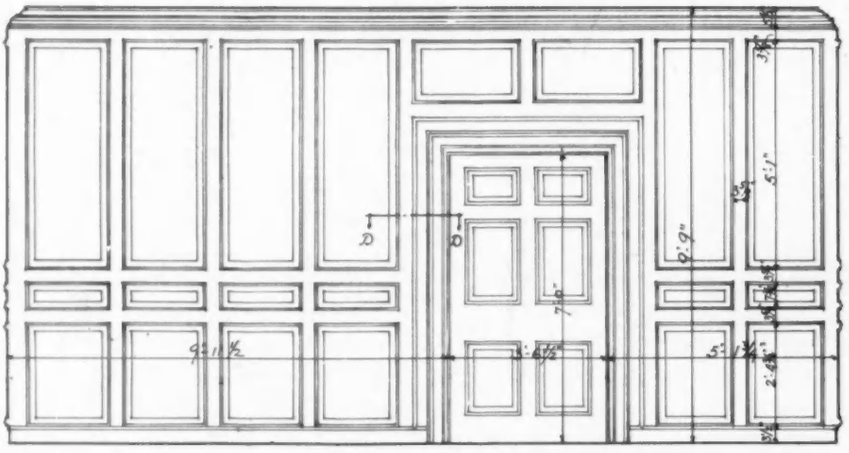
THE SIR WILLIAM JOHNSON HOUSE, FORT JOHNSON, N. Y.



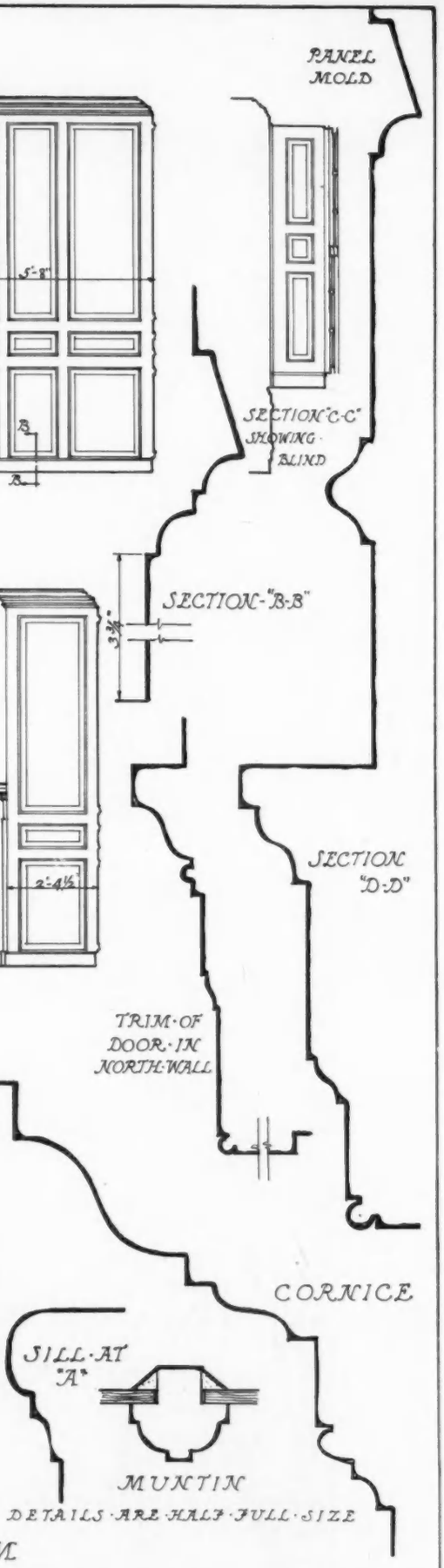
SOUTH·WALL

WEST·WALL

SCALE·OF·ELEVATIONS·IS·¼"-1'-0"



EAST·WALL

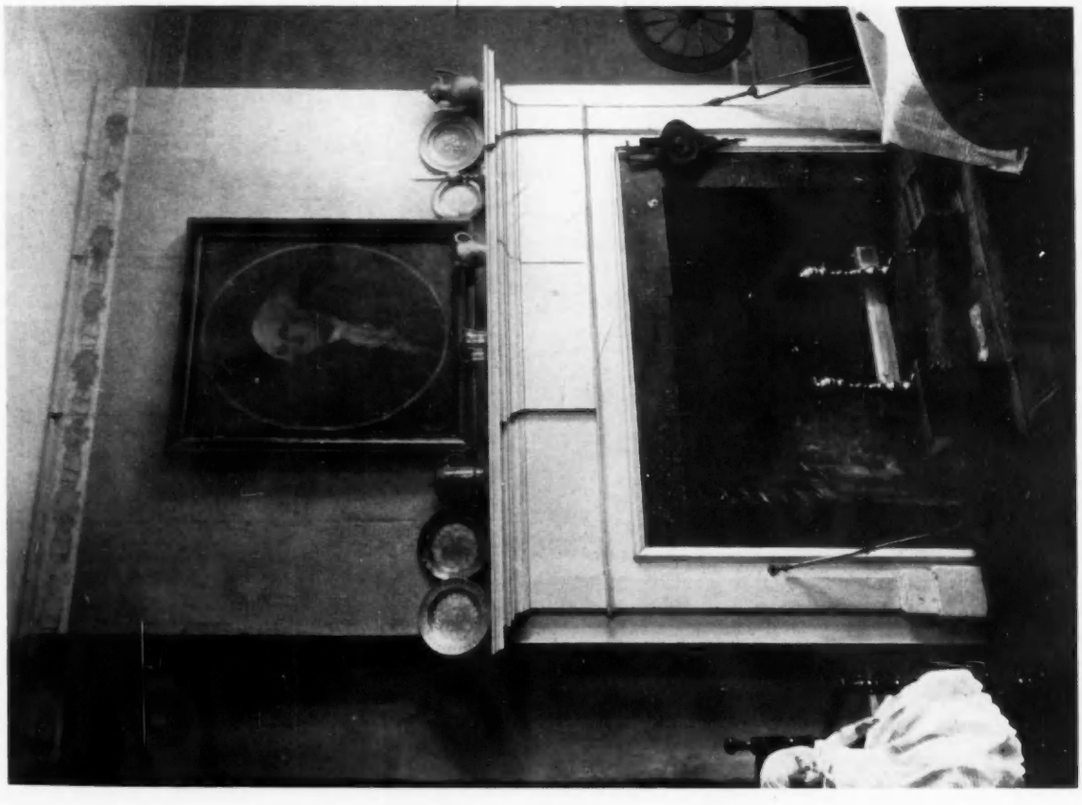


DETAILS·ARE·HALF·FULL·SIZE

LIVING·ROOM

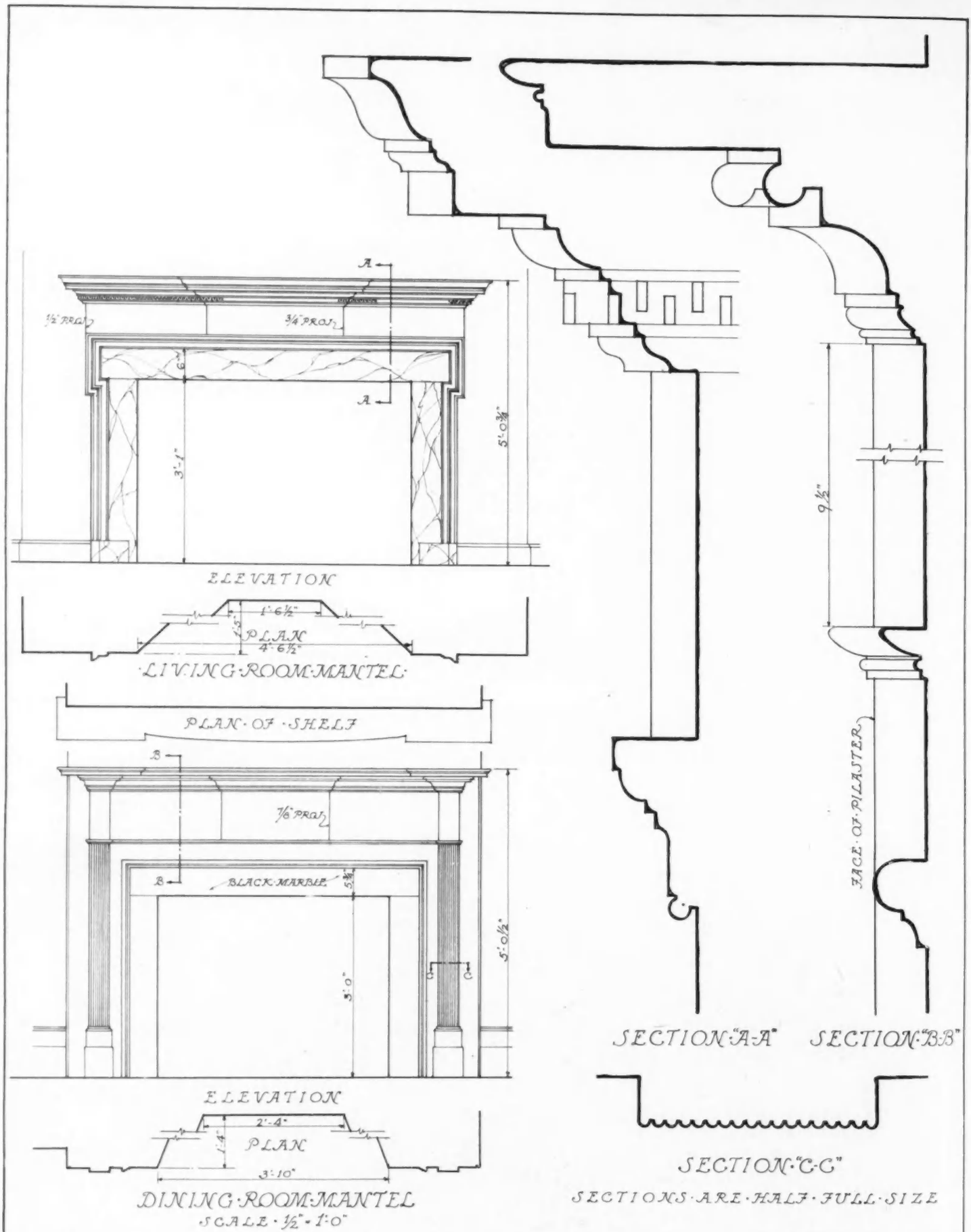
EARLY·AMERICAN·DOMESTIC·ARCHITECTURE · · · 1920·	SIR·WILLIAM·JOHNSON·HOUSE FORT·JOHNSON·N·Y·	MEASURED·and·DRAWN By·WM·D·FOSTER··· And·LEWIS·E·WELSH·

LIVING ROOM MANTEL



DINING ROOM MANTEL

THE SIR WILLIAM JOHNSON HOUSE, FORT JOHNSON, N. Y.



EARLY AMERICAN DOMESTIC ARCHITECTURE ... 1920	SIR WILLIAM JOHNSON HOUSE FORT JOHNSON N.Y.	MEASURED and DRAWN By WM. D. FOSTER ... And LEWIS E. WELSH

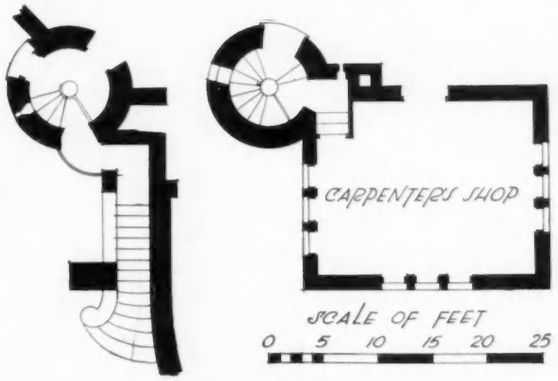
Farm Buildings of Arthur Curtiss James, Esq. Newport, R. I.

By W. F. ANDERSON
GROSVENOR ATTERBURY AND STOWE PHELPS, ASSOCIATED ARCHITECTS

TO those familiar with the Rhode Island coast line in the vicinity of Newport but small introduction is needed concerning the natural beauties, which the architect finds as a setting for his proposed buildings. For the benefit of those unacquainted with this stretch of coast, it may not be amiss to say that generally it is a rocky shore with small beaches, and bays formed between projecting points. Such in general are the conditions at this estate, and such a hollow facing toward the water was chosen as the site for the farm group. The land contours favored placing the buildings in a curved line, not entirely regular but sufficiently so to give, from a bird's-eye view, a rough horseshoe shape.

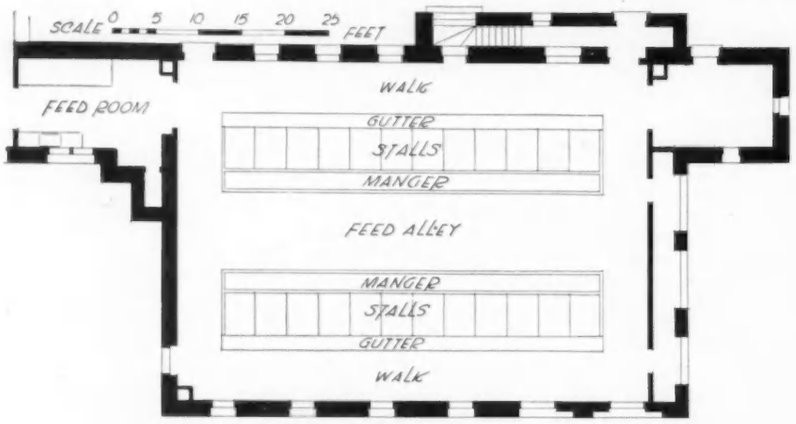
The visitor's first impression is that he has entered a village of Northern Italy. There are the same stone walls laid with wide flush joints in light mortar, the old moss colored tile, the irregular roof lines of higher buildings and the home-like cottages against the hillside. The eye follows the curving road around the little valley between the hills, and as the visitor actually travels the road, he crosses, on the top of the bridge, over the road by which he entered, and thence by a higher level on and up the hills to other parts of the estate.

As might be expected the ground provided all the stone needed for the masonry work, and a fair sized quarry was developed in the process of excavation. The stone is of granite formation, and where exposed to view is laid in random ashlar with the joints slushed full. In many places the mortar has been spread out and resembles a stucco surface. The stones framing all openings were cut to a line but not dressed. The voussoirs of arches were roughly formed to shape, no two of the same size. The general wall thickness is 20 inches.



Roofing tile used are unusual and follow an old hand made tile in design and finish; they are of mission shape, hand combed and sprayed with

Carpenter Shop from Plaza of Cow Barn



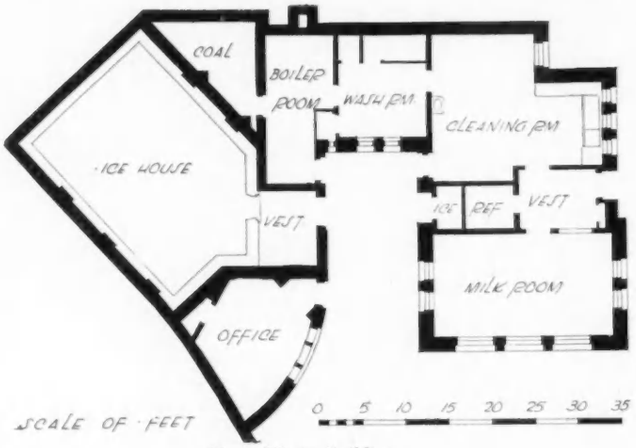
Plan of Cow Barn

beneath the cow barn which stands at one end of the bridge over the main drive.

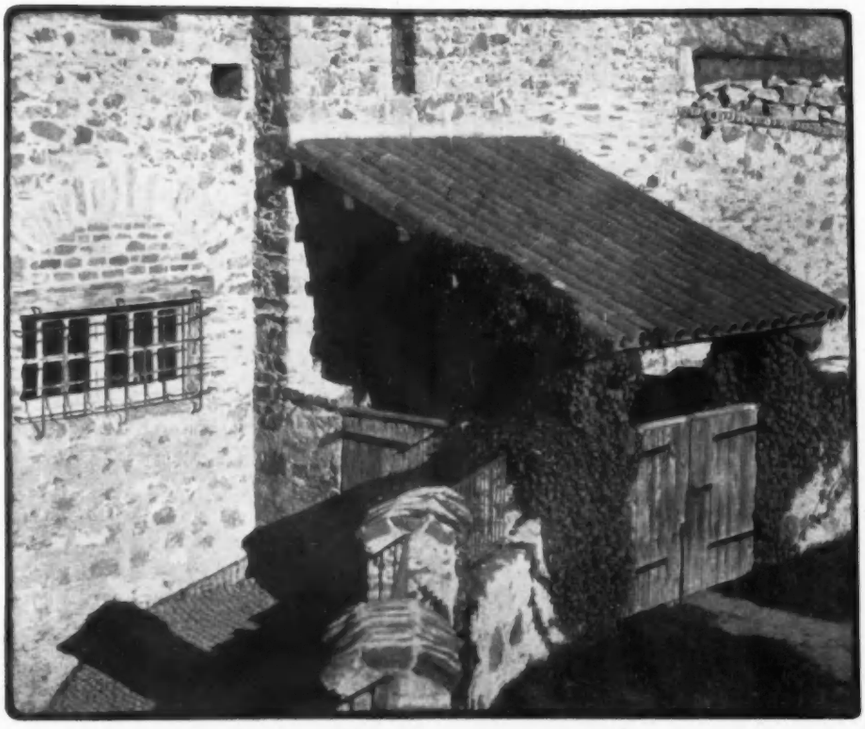
The carpenter shop stands on high ground at the opposite end of the bridge. Here, beneath the roadway, were constructed storage sheds and coal pockets. The exposed walls of these structures are of stone, matching all other stonework and blended into the ensemble in a very pleasing manner. In the buildings where the stock are quartered, the walls are damp-proofed on metal lath.

pigments before firing and the color effect is that of a surface covered with moss and lichens. Comparatively little woodwork is exposed to view and this is partly painted and partly stained.

The farm group proper is composed of a cow barn, accommodating 24 cows, and an L shaped extension in which are located the feed and hay storage spaces besides a maternity building, bull pens, dairy and ice houses, two cottages accommodating one family each, carpenter shop and work building, garage and storage sheds. The natural ground level permitted construction of a stable with six horse stalls and a wagon shed



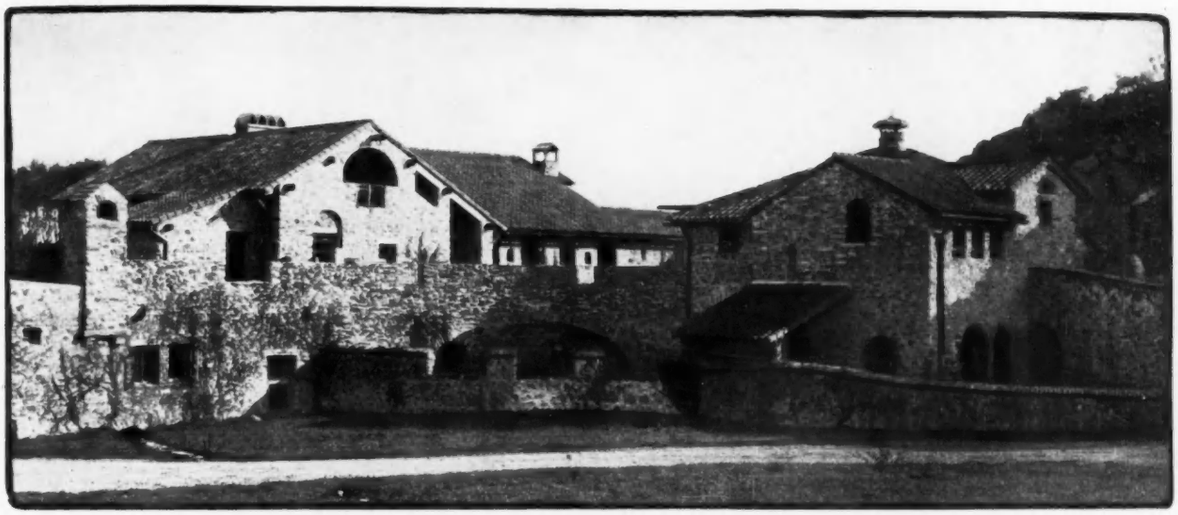
Plan of Dairy Building



Entrance to Bull Pens in Maternity Building (G)

In the cow barn the floors of the stalls are laid in cork brick and other floors are of cement.

In the dairy one finds white ceramic tile floors throughout, with white glazed tile walls from floor to ceiling in vestibule, milk room and cleaning room, and tile wainscots in wash room and toilet. Everything in connection with the dairy is arranged to promote cleanliness and purity of the milk products. The receiving tank is located in the vestibule and discharges through a pipe into the cooler located in the milk room. Here are installed a cooling apparatus operated by electric pump and water circulating system, a separator,



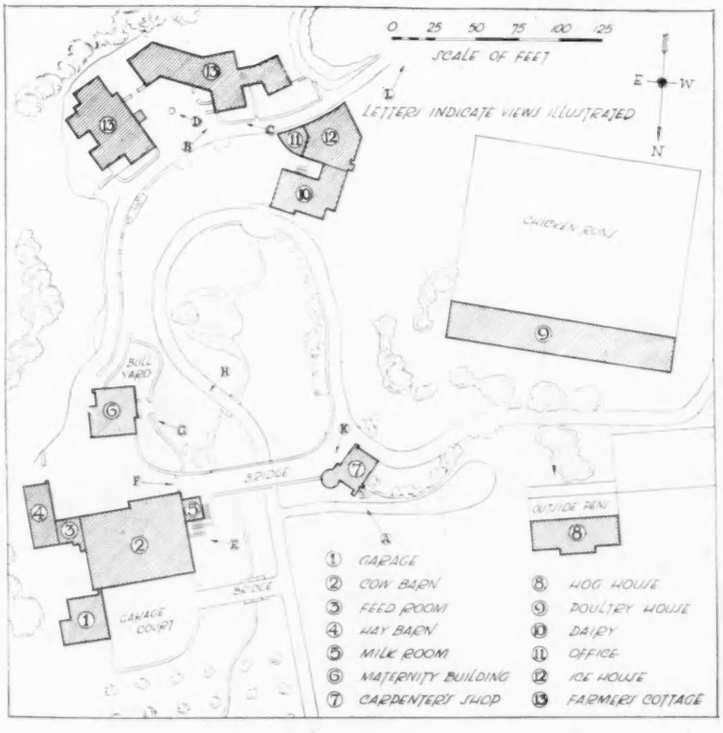
Cow Barn (Left) and Maternity Building (Right) with Bull Pens in Lower Story (H)

bottle filler, churn and other devices of like character. So far as possible all machinery is driven by electric motors.

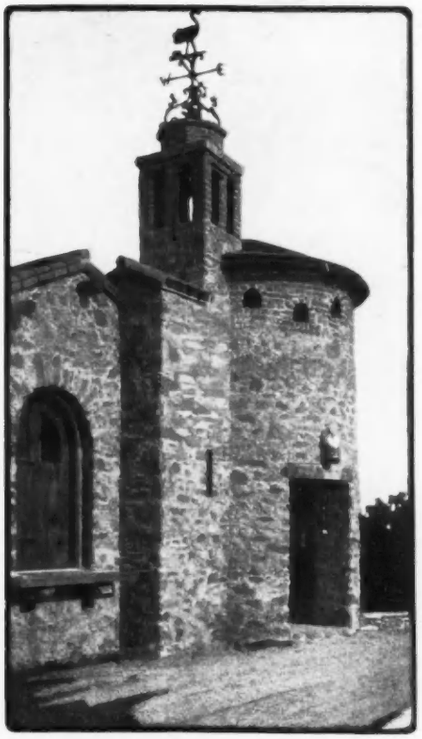
A complete high pressure steam boiler is provided to supply live steam at the various points needed. The washing room contains the steam bottle washers and sterilizers, and just beyond are shower baths for the men, a washing machine to wash white working clothes and a hot room for drying them.

One very interesting feature of the dairy is the refrigerator. This has the ice chamber at the back, so that it can be easily filled, and the front portion is of tile and fitted with glass shelves. It is lighted by electricity and, particularly when illuminated, makes an attractive exhibit. The ice house is built directly against the cliff wall and the roof is covered with earth in which trees and shrubbery are growing. It is connected directly with the dairy building, for ease of access, and is constructed of masonry matching the other buildings. The walls are insulated with mill shavings behind sheathing boards.

The carpenter shop and the farm office buildings presented opportunities for architectural effect.



Block Plan (Arrows and Letters Show Angles at which Views are Taken)



Upper Part of Carpenter Shop (K)

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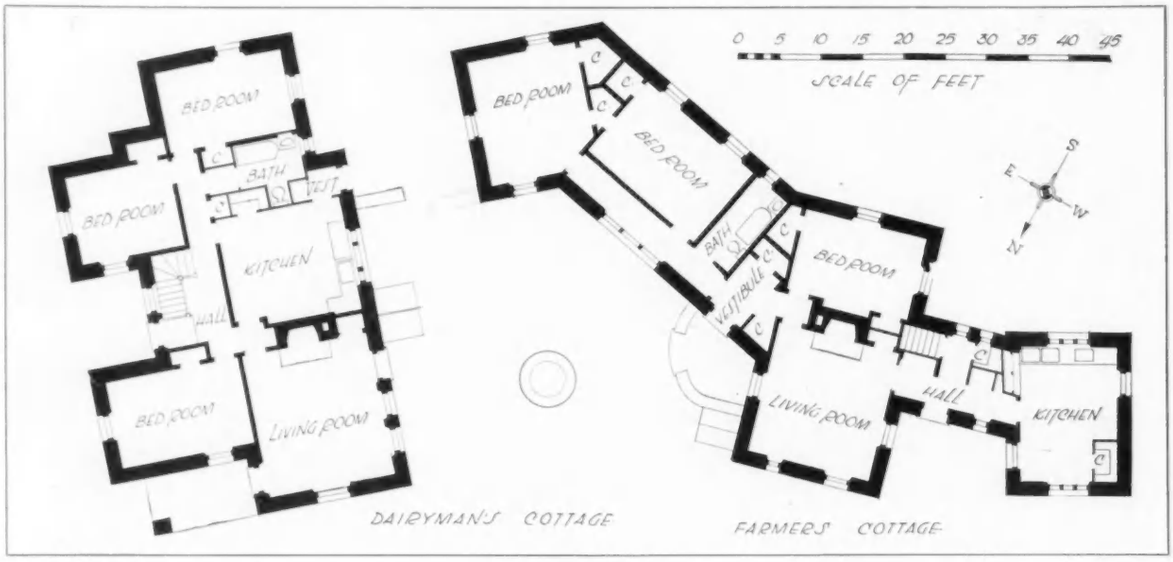


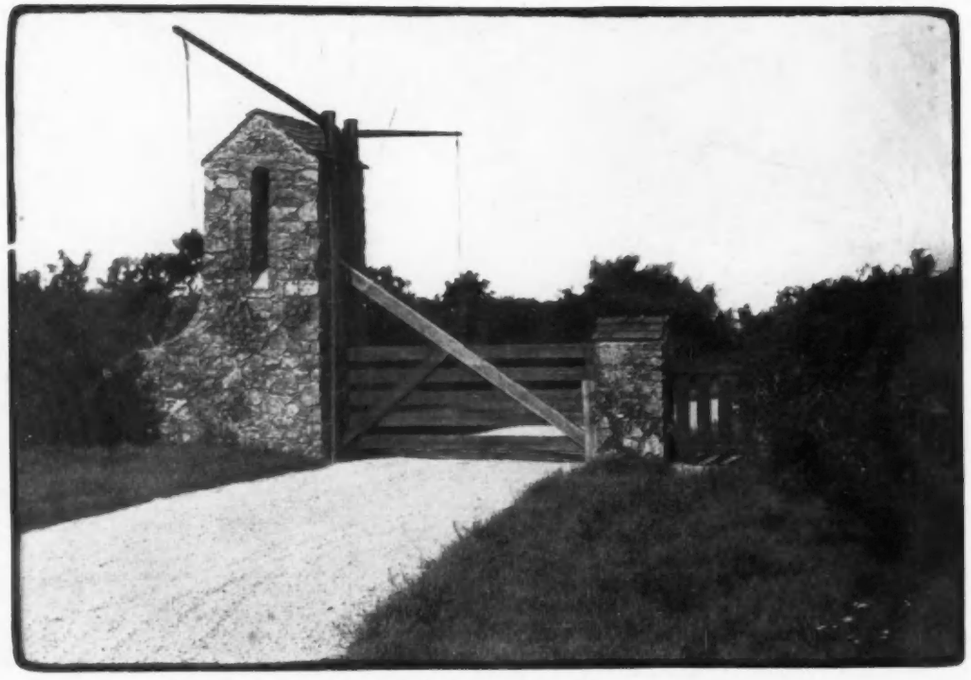
Plan of Cottage Group

The shop is built with stone walls pointed up and left exposed on the inside. The outside stone stairs and the weather vane supply attractive bits of detail. As far as possible all lumber used was obtained from old buildings with natural weathered surfaces. Rafters, beams and floor boards are laid to show the weathered surfaces. The doors are of pecky cypress; new stock was stained and antiqued.

The farm office follows the same general scheme but has the inside of the walls finished in rough Portland cement. The fact that this building is erected against the side of the cliff which forms one wall determined this finish.

The cottages in their inside arrangements for living accommodations conform to the plan of the best buildings of their class. The interiors of these cottages and of the farm office are as thoroughly Italian in color scheme and detail as the exteriors. By means of the large fireplaces, heavy beamed ceilings, and bright colors used in the decorations, the old world atmosphere is faithfully preserved.

The piggery with its adjoining yards must not be overlooked, nor the smoke house. Here in rooms devoted to killing, dressing and smoking, the young porker is converted into his ultimate form of ham and bacon in the most approved manner.



South Entrance Gate (L)

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STAIRS IN CARPENTER SHOP FROM LOWER TO UPPER LEVEL (A)

"SURPRISE VALLEY FARM" FOR ARTHUR CURTISS JAMES, ESQ., NEWPORT, R. I.

GROSVENOR ATTERBURY AND STOWE PHELPS, ASSOCIATED ARCHITECTS

CORNER OF FARMER'S COTTAGE (B)

COURT BETWEEN DAIRYMAN'S AND FARMER'S COTTAGES (C)

"SURPRISE VALLEY FARM" FOR ARTHUR CURTISS JAMES, ESQ., NEWPORT, R. I.

GROSVENOR ATTERBURY AND STOWE PHELPS, ASSOCIATED ARCHITECTS

CORNER OF DAIRYMAN'S COTTAGE (D)

COW BARN WITH STEPS FROM LOWER TO UPPER LEVEL (E)

"SURPRISE VALLEY FARM" FOR ARTHUR CURTISS JAMES, ESQ., NEWPORT, R. I.

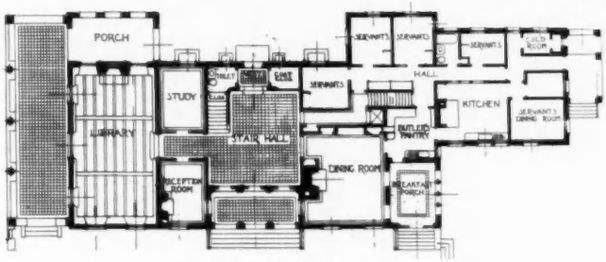
GROSVENOR ATTERBURY AND STOWE PHELPS, ASSOCIATED ARCHITECTS

GENERAL VIEW

HOUSE OF REV. WILLIAM M. CRANE, RICHMOND, MASS.

KILHAM & HOPKINS, ARCHITECTS

VIEW FROM APPROACH



FIRST FLOOR PLAN

SECOND FLOOR PLAN

DETAIL OF TERRACE FRONT

HOUSE OF REV. WILLIAM M. CRANE, RICHMOND, MASS.

KILHAM & HOPKINS, ARCHITECTS

ENGINEERING DEPARTMENT

Charles A. Whittemore, *Associate Editor*

Terra Cotta Roofing Tile

PART I

By ALFRED LO CASCIO

THE subject of terra cotta roofing tile has been discussed from time to time from almost every angle but, notwithstanding this, the fact remains that in some sections of the country roofing tile is but seldom used. There is no question but that vitrified shale tiles are highly artistic in color and form, and are practical for use with almost any type of building. Many opportunities have presented themselves to owners, architects and builders for making very artistic structures out of work in hand, where the finishing touches could have been given by the use of tile, but for some reason or other these opportunities have often been neglected.

The question naturally arises whether the owner, architect, builder or manufacturer is at fault. In this age of progress and selection of materials from the standpoint of durability instead of that of first cost, it would seem as though the use of terra cotta tiles at present should far exceed their use in the past. It may be that many architects fully intend to use roofing tile in their projects but that stress is laid so frequently on economy that some other form of roofing is adopted; this economical turn gains the day from the standpoint of first cost, although in the course of a few years the maintenance cost of the other material may far exceed the increased initial expenditure if tile had been used.

If the manufacturer is at fault, it may be that he has not sufficiently advertised, or his salesmen have not sufficiently emphasized, the essential durability and practicability of roofing tile, and also the ultimate economy which will inevitably result from its use. If the architect is at fault it may possibly be because he has not taken time to investigate the great merits and the adaptability of the various kinds of roofing tile, and the attractive and pleasing variations in textures and artistic color schemes which may be worked out with these products—color schemes which will last indefinitely and be mellowed with the passing of time.

The owner may be a trifle at fault, perhaps, due to false impressions of price and first cost, and also because the material is not often presented in the light of its true and lasting values. Undoubtedly it would be beneficial to many of our fine buildings and residences, if all of the people interested in the production and

House at Brookline, Mass., with Red French Tile Roof
Newhall & Blevins, Architects

House at Philadelphia, Pa., with Red Shingle Tile Roof
E. Allen Wilson, Architect

the use of tile roofing would investigate a little more fully the field of its possibilities and would co-operate with each other. This would effect a decided change in the attitude of the general public towards this material which, undoubtedly, in the course of time, will be more generally used because of its merit, and in spite of the present lack of tendency to more general use.

In this product, as with most manufactured materials, the cost of the pattern is a considerable factor. Few factories are equipped with machinery for special pattern work, and the manufacturers frequently place all sorts of obstacles in the way of using special forms, shapes and sizes, and urge, instead, the acceptance of stock products. The time has come, however, when some manufacturers are paying special attention to individual treatment and design, special colors, special surfacing and other details which make for individuality. They are also glad to work to the best of their

Fig. 1. Spanish or Old Mission Roof Tile

Fig. 2. French Type Tile, Hip and Ridge

ability with architects, experimenting without end to get the desired effects, providing there is a sufficient interest to stimulate their endeavors.

Architects should realize that factory conditions are frequently such that the manufacturer may not be able to produce special tile in the time allowed, no matter how keen his willingness and desire to do so may be. The cost of such a product does not deter the manufacturer, provided his time allowance or other factors permit his producing the special work. It is obvious that when special work is ordered the architect or owner must be prepared to find slight variations in the completed product. A knowledge of kiln work, firing and other process details would immediately demonstrate the impracticability of expecting each tile to exactly duplicate in color and marking the sample submitted. The variations are slight, however, and are due only to the manufacturer's earnest endeavor to produce perfect results. Just such efforts as these bring forth the moss covered tile, the hand roughened surfaces and various antique sprays, all of which contribute to the general aged appearance so that many roofs in which these materials have been used have the appearance of being far older than

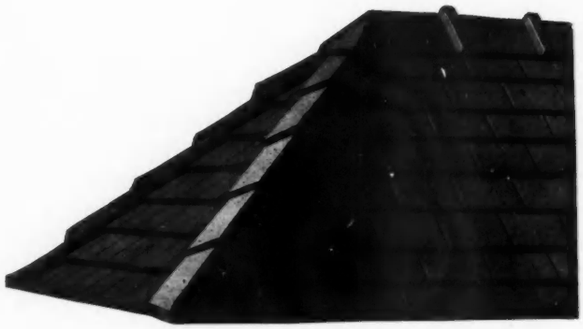


Fig. 3. Closed Shingle Tile with Hip and Ridge

they actually are, often adding largely to the appearance of the finished buildings. Color schemes and textures may be used in certain constructions so that tiles wonderfully resemble those toned by nature's processes, and will produce such effects as are so often seen in foreign countries—roofs aged, with the hard lines lost, even to the valleys being rounded, the surfaces swinging gracefully from roof to roof with mitered hips.

There are three general forms of roofing tile now in common use: the Spanish or old mission, (Fig. 1) French, (Fig. 2) and closed shingle, (Fig. 3). Each type illustrated here has an appropriate setting and

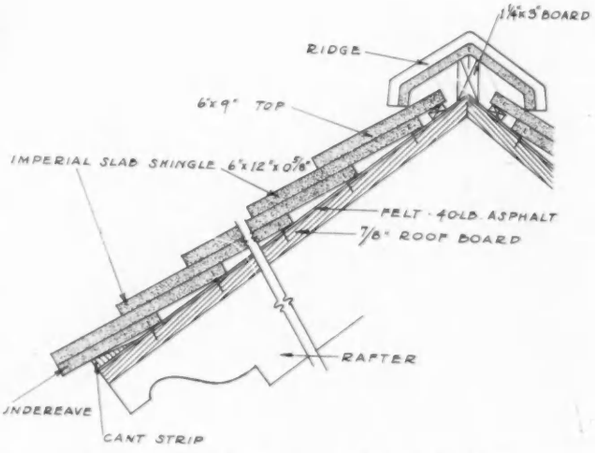


Fig. 4. Section Showing 6-inch Slab Shingle Tile

each type has its particular use. The Spanish tile would be obviously out of place in the small cottage, but in the monumental building it adds far more to the general appearance than would the closed shingle tile. It also adds "scale" to the structure and this feature must always be considered. A large, unbroken expanse of roof requires some texture, character or lines to add interest to the surface. In a small, broken up roof, on the contrary, the Spanish or French tile would only create an appearance of restlessness, due to the small surfaces.

In connection with the installation of each kind of tile there are differences in the preparatory carpenter work which must not be overlooked when planning for their use. The principal difficulty in the use of tile for roofs probably lies in the fact that until recent years the architect and contractor were not familiar with the necessary construction and details of their use, which differ materially from the details adapted for use in any other form of roofing.

Fig. 5. Yale College Memorial Quadrangle, New Haven, Conn.
James Gamble Rogers, Architect

It is very simple to arrange the construction as may be necessary to take care of the different points, but in order to make clear the preparatory work which should be done, before the tiles themselves are used, it would be well to study carefully some details regarding their use.

Fig. 4 shows the construction used in both eaves and ridge where shingle tile is used. This tile usually comes about 6 inches wide, 12 inches long and $\frac{3}{8}$ to $\frac{5}{8}$ inch thick. In connection with this shingle tile it is necessary to provide at the eaves of the roof a cant strip of wood approximately $1\frac{1}{4}$ inches high, beveled to nothing on the roof. Over this the roofing felt is placed, then a hip and ridge board approximately $1\frac{1}{4}$ inches thick and 3 inches high is used at all hips and ridges to receive the hip and ridge tile. It makes a far better construction to place the hip and ridge boards over the felt after the roof has been papered in, and these boards should be placed when the tile man arrives on the job to begin his work, and under his direction. Besides using elastic cement for both constructions, the hip and ridge tile are nailed in place to the hip and ridge boards.

Fig. 5 is a photograph illustrating the use of this shingle tile, with the eaves and preparation for ridge board clearly indicated.

Figs. 6 and 7 show the type of construction with the flat deck roof joining the tile sloping roof over the tile. This construction is very simple and practical, and yet it is perhaps not so well known as some of the other methods of roofing. After placing a 2 x 6 board all around the top of the deck, 3 x 4 openings about 10 feet apart are made, forming cutouts, which are thoroughly flashed, and over this the ridge tile is placed, giving a finished appear-

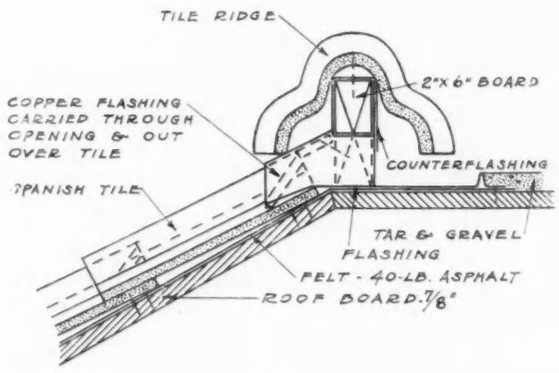


Fig. 6. Method of Flashing at Deck to Carry Water over Tile

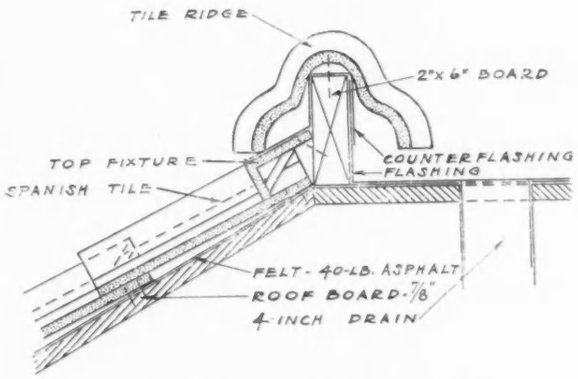


Fig. 7. Method of Flashing at Deck When Inside Drain Pipe Is Used

Roof of Spanish or Old Mission Tile Showing Usual Practice in Sloping from Vertical Walls

ance and indicating the flat roof in back of the original board. This construction can also be applied even though the water is taken down through the building somewhere on the flat roof; the same counter and under flashing in connection with the 2 x 6 board will give a perfect construction. If flat tile is used, in place of the Spanish roll tile, and if the ridge is angular instead of round, the same construction applies with the exception that the height of the ridge board is changed, and a 2 x 3 instead of 2 x 6 is used, depending, of course, upon the pitch of the roof and the kind of tile used.

Fig. 8 shows a method of flashing a valley with copper or other metal. In this case, the copper used is 20-inch stock, 10 inches turned up on each side and turned up 1 inch along the edge the full length of the valley, and cleated with a small strip of copper to the board roof in a manner to prevent nailing through the copper valley itself. Care should be taken that the roofing paper is placed over the metal valley. This, of course, is a construction

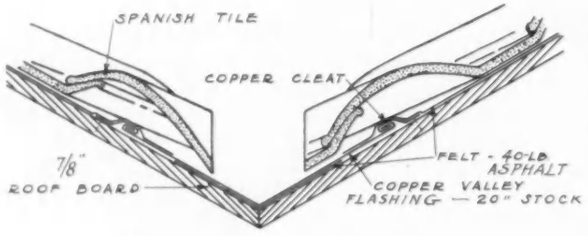


Fig. 8. Section Showing Valley Flashing

where only a few inches of the copper on each side of the valley are exposed. If a rounded valley, such as is used with heavy shingle tile, is desired the flashing must be over and under every course of tile. Valley tiles, meaning the finish on each side of the valley itself, are specially made to fit the pitch of the roof, which is far better than attempting to cut the valley tile. This would leave openings in every course, while the specially made tile is closed throughout the length of the valley.

In connection with the different types of tile installations, it is well to call to mind again one of the uses of roofing tile which has frequently been neglected; that is, for parapet covers. Fig. 9 shows two methods of using the stock tile for this purpose. There is also a special terra cotta tile made for the express purpose of covering parapet walls. Wherever these walls are covered, especially in the cases of low parapets, copper should be carried up on the inside of the wall and flashed in under the tile.

The methods of application and conditions under which tile are used in the old world countries are well recognized to have very little in common with the roofing problems encountered in central North America. It is common knowledge that many were the dismal failures where English or Mediterranean methods were followed for the exclusion of the elements when American roofing tile was in its infancy or when importations themselves were employed.

With unsatisfactory tile roofs in many architects' minds a decade ago, the manufacturers have built

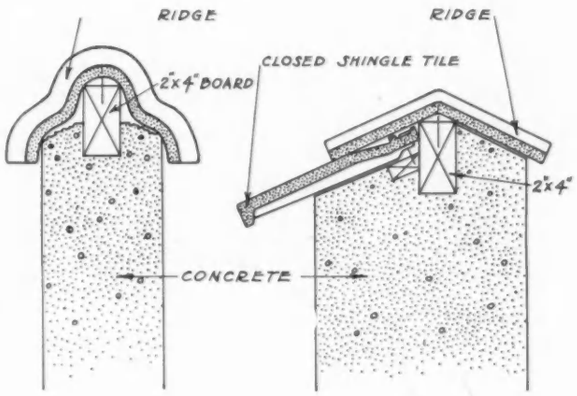


Fig. 9. Example of Tiling for Parapet Walls

up a tile suitable to our requirements. Styles which were considered "unique" at the time were abandoned and forms which fulfill the ideals of students of European work of merit are incorporated with the substantial clay body now used—a truly uphill task and a commendable piece of progress.

With the plastic materials at hand it is desirable that the effects produced should not deviate from those conceived within the limits of the ceramic arts.

Truss Design and Details

PART IV. WOODEN ROOF TRUSSES

By CHARLES L. SHEDD, C.E.

IT IS common in wooden buildings to have an inclined roof and when such is the case and the span is great enough to require a truss, one of such shape as shown in Fig. 14 is frequently used.

In this diagram the wooden members are shown by heavy lines and the steel or wrought iron rods by light lines. All of the wooden members resist compression except the bottom chord. Some designers have constructed this too of steel, espe-

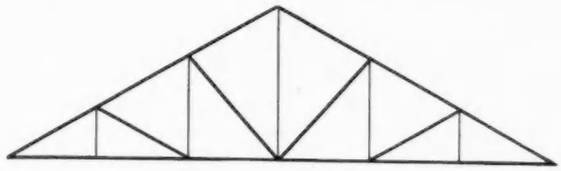


Fig. 14

cially in heavy trusses where the framing of notches in this stick together with the area required for direct stress necessitated an unusually large stick of timber. All of the rods resist tension except the short vertical rods near the end which do not resist any stress unless there is a load on the bottom chord such as a ceiling or a hung balcony. When there is no stress in this rod it may be omitted unless the span of the lower chord from the support to the first panel point is so great that the member would sag too much under its own weight.

A detail of one of the interior joints is shown in Fig. 15. Here is also shown the manner of constructing the roof purlin and timbers to rest on the truss.

The boards run at right angles to the truss and are nailed to rafters running parallel to the truss and on the incline. These rafters are fastened to purlins under them which, in turn, run at right angles to the truss. The rafters are notched slightly over the purlin, say about one inch, to prevent slipping and to aid in accuracy of framing. These purlins act as beams. Their principal loads are from the dead load of the roof and from snow. These of course, due to gravity, are vertical. In addition to these loads they resist a horizontal force due to the wind. In case the wind is considered as acting normal to the roof it may be resolved into its two horizontal and vertical components. In any case the horizontal component is small compared to the vertical, as a general thing. The purlin is framed at right angles to the slope for convenience in making the truss and rafter connections and not, as might at first glance appear, for greater strength. On this account it should be made broad as well as deep, otherwise it would deflect except as the rafters, when in place, might stiffen it if fastened at the bottom in such a way as to resist thrust.

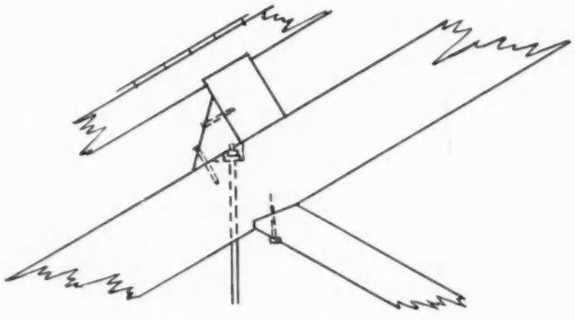


Fig. 15

A block of wood may be used as shown to brace the purlin and attach it to the truss. The location of the purlins should be at or near the joints of the truss to prevent bending in the top chord. The rod passes through the top chord and its stress is transmitted to it and the diagonal by a plate countersunk into the top chord to allow for direct horizontal bearing. The diagonal is notched into the chord and held in place by a screw or spike.

In making this notch there is an opportunity for some variation in design. It will be remembered that a previous article of this series pointed out

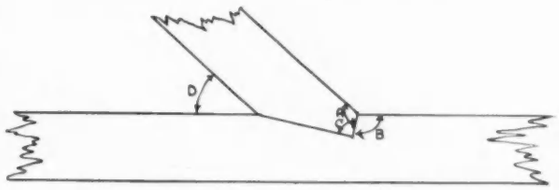


Fig. 16

that the allowable stress in bearing is much greater on the end of the grain in a wooden stick than across the grain. It follows that the allowable bearing on a surface inclined at an angle varies between these two extremes. This is frequently taken as a straight line variation which is probably good enough. In a standard engineering text book a formula was included giving a curve for this variation. A year or two ago in one of the professional publications the accuracy of the derivation of this formula was questioned. However, in the opinion of the author, this formula remains, in its final results, as good as has been proposed by anyone up to the present time.

When two sticks, as shown in Fig. 16, are framed

into each other in a truss a notch is made one side of which is considerably longer than the other. The short side resists the greater part of the stress in the diagonal. If the angles A and B are not equal it follows that a different allowable stress is obtained according to which stick is investigated and that the least allowable governs and determines the length of this short side. It is evident that the smaller this notch can be made the better it is as less material will be wasted in the lower chord. To obtain a minimum notch it is therefore necessary to make these two allowable stresses equal, which means that the angles A and B should be equal. It will be found that if the angle C is made a right angle this condition will be very nearly fulfilled for all ordinary cases. Also, if C is made a right angle, it is easy for the carpenter to lay out this joint when the length of the short side of the notch is given. This is the method preferred by the author but various designers vary this practice from making A a right angle to making B a right angle. When the angle D is not too great, or the unit stress in the diagonal too great, this notch is designed very simply by a curve adapted from the formula just mentioned.

As in all wooden trusses the end joint gives the greatest opportunity for study and it results in a great variety of design by different engineers. In Fig. 17 is shown the design of an end joint which is frequently used. Here two plates are used, one on either side of the truss. To these plates are riveted smaller plates—four in the drawing to each large plate. These smaller plates fit into

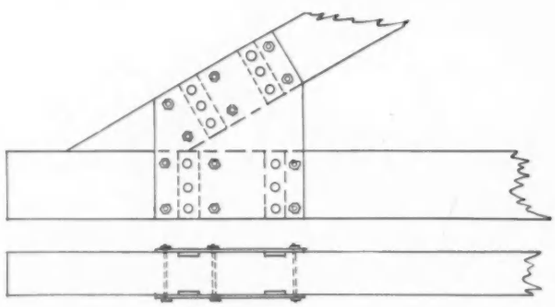


Fig. 17

notches in the wooden sticks. The heads of the rivets are countersunk into these small plates so that a good joint may be made easily. These plates are held in place on either side of the truss by bolts passing through the sticks.

The thickness of the small plates is determined by the stress in the two sticks. Sufficient area must be provided for the plates to bear against the ends of the grain in the sticks without over stressing the wood. The number of rivets to fasten the small plates to the larger are determined by these same stresses and the rivets are limited by their strength in shearing. The bearing will be sufficient for the rivets against the plates if the plates are $\frac{5}{16}$ inch or more in thickness and $\frac{3}{4}$-inch rivets are used.

The bolts do not take any figured stress but merely hold the plates in position. They can be made quite small, say $\frac{1}{2}$ inch in diameter. The chief stress which actually comes on them is tension due to the tendency of the large plates to buckle and they must be so placed as to resist this buckling to the greatest advantage. For example, the lower chord is in tension tending to pull it away from the joint toward the center. If this stress should be increased until the joint failed, and if it failed by the buckling of the plate, the end of the plates nearest the center would fly out from the lower chord allowing the small steel plates to come out from the notches. To resist this the bolts are placed just to the right or left of the small plates. This kind of failure was witnessed by the author a

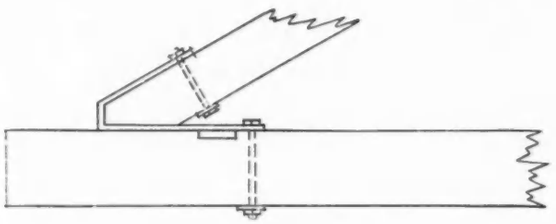


Fig. 18

few years ago when an unexpected stress was applied to a truss which otherwise, due to the factor of safety in the design, would have resisted this condition without serious injury.

In Fig. 18 is shown an end joint of a wooden truss where the stresses and sizes are smaller than would be required for a joint such as shown in Fig. 17. The principle is substantially the same for both types of design. Considerable variation in practice is found among different designers, especially in the placing of the bolts; some designers have inclined the bolts so that they would be normal to the diagonal member and have figured them to take direct stress. The author does not use this type of design for a truss of any size, due to uncertainties in the division of the stress between the notch and bolt.

When this type has been used a short stick has sometimes been added under the lower chord between it and the bearing. This member reinforces the lower chord where much material is cut out for the lugs and also helps to take care of eccentricity in the stresses at this joint. This stick has small plates inserted between it and the lower chord and notched into it to prevent slipping and the two should be securely bolted together.

In long trusses it is frequently desirable to splice the lower chord. If the splice is made properly it will often be found to be more economical to pay the higher price of one long stick; it can be accomplished more economically than in the case of a shallower truss with parallel chords, by choosing a point to splice somewhere near the middle where the stress is small.

MINOR ARCHITECTURE
EXEMPLIFIED IN MODERATE COST BUILDINGS

An Automobile Sales and Service Building

PRESTON J. BRADSHAW, ARCHITECT

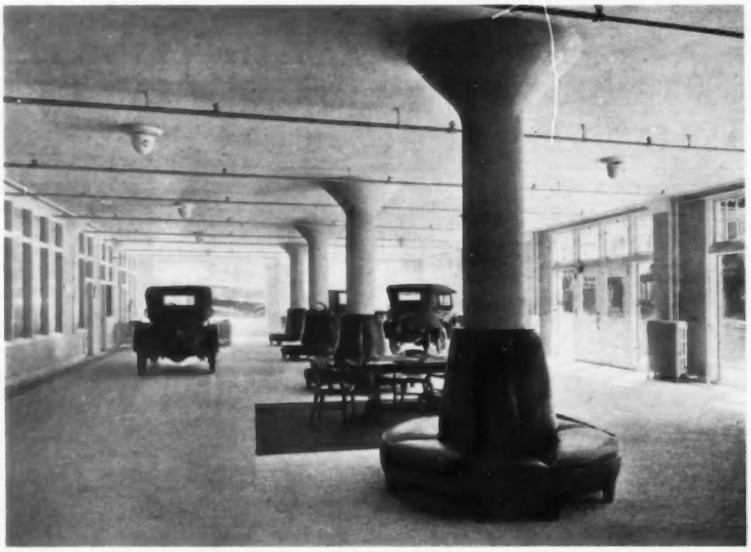
THE improvement in the design and planning of sales and service buildings, as well as of structures of various kinds connected with the automobile industry, has been repeatedly noted in architectural publications during recent years, and countless instances where such structures have been given a distinctive architectural treatment prove that their owners, as well as their occupants, appreciate the fact that good architecture has a definite advertising and sales value which must be reckoned with.

A recently constructed building which possesses considerable merit from this viewpoint is the one occupying the north side of Locust street between 18th and 19th streets in St. Louis and occupied by the Weber Motor Car Co. and the Weber Implement and Automobile Co. The building is used for the sale of both new and used cars and it also contains departments for giving service and making repairs as well as work shops for the complete overhauling, painting and upholstering of cars.

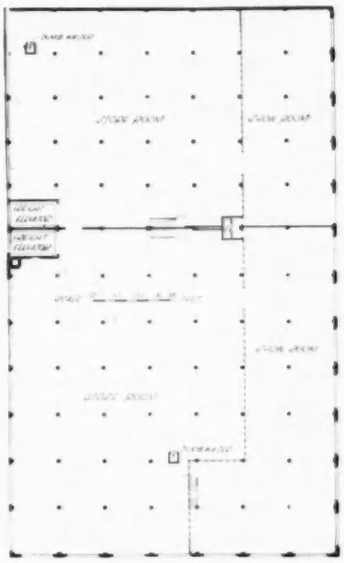
The building is a three-story structure of reinforced concrete skeleton, flat slab construction, the first story of which is of terra cotta and the upper stories of kiln run red matt brick, the capitals of the pilasters and the frieze about the top being also of terra cotta. The necessity of having such a structure well lighted has resulted in its being, like Hardwick Hall, "more glass than wall," but the excellent handling of the brick pilasters between the large windows and the use of steel sash at the upper floor windows, with their surfaces well broken up into small panes, have given a pleasing effect. The building is heated by steam and every part is fully protected against fire by an automatic sprinkler system.

The arrangement of floor area in the building and the planning of the different departments have

Sales and Service Building for the Weber Motor Car Company, St. Louis, Mo.



View of Main Show Room

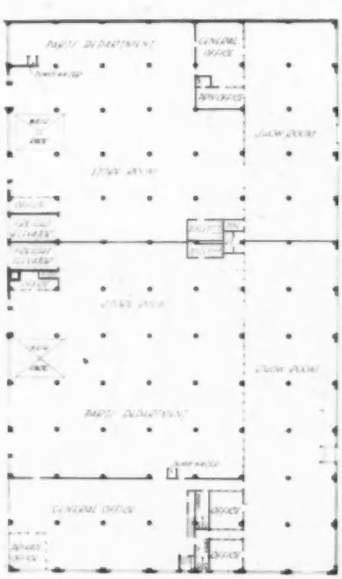


Second Floor Plan

proved to be economical of space and satisfactory for the various purposes which the structure serves. The front of each of the three floors, facing south and therefore well lighted, is given up to show rooms. The bays are 21 feet square and therefore but one row of columns extends through these departments. An elevator, entirely apart from those which serve the other parts of the building, connects the three show room floors and in both the first floor show rooms are several private offices which are often useful for receiving customers. Space on the 19th street side of the main floor is given up to general offices and a private office; this department has its own entrance from the street and is provided with two sets of toilets.

What might be called the service rooms, including the store rooms, parts department, repair rooms and other similar departments are entered directly from the alley at the north side of the building. Here are freight elevators to all floors, wash racks and dumb waiters to the different floors while at each of the motor entrances there is an office for the checking of vehicles entering and leaving.

The floors of the show rooms are of ceramic tile; clear maple has been used for the floors of the office portions and throughout the shop and factory sections the floors are of cement, monolithic with the reinforced concrete slab and hardened by the application of a liquid hardener. The building was erected entirely under the supervision of the architect's office from which sub-contracts for work of different kinds were placed.



First Floor Plan

General Office on First Floor

DETAIL OF MAIN FACADE

BUILDING FOR THE WEBER MOTOR CAR CO., ST. LOUIS, MO.

PRESTON J. BRADSHAW, ARCHITECT

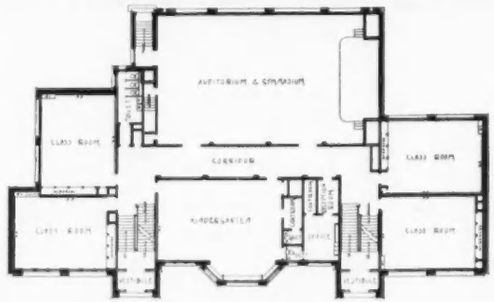
STREET FACADE

FIRST AND SECOND FLOOR PLANS

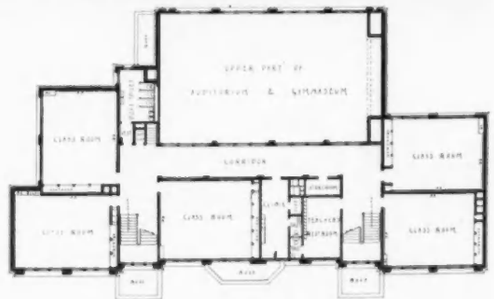
BUILDING FOR C. C. WHITTEMORE, CATERER, BOSTON, MASS.

ALLEN & COLLENS AND J. LAWRENCE BERRY, ARCHITECTS

BASEMENT PLAN



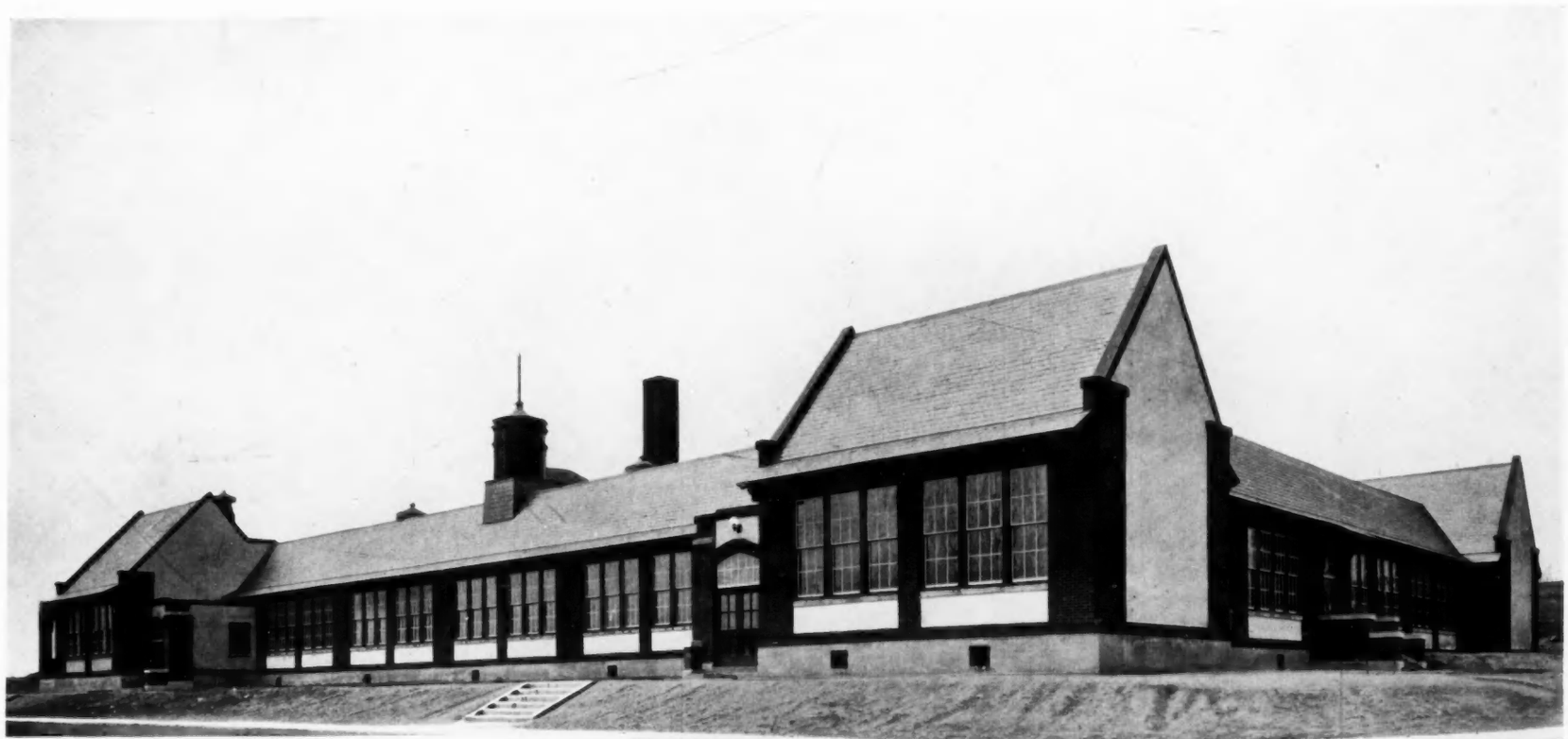
FIRST FLOOR PLAN



SECOND FLOOR PLAN

JEFFERSON SCHOOL, SYRACUSE, N. Y.

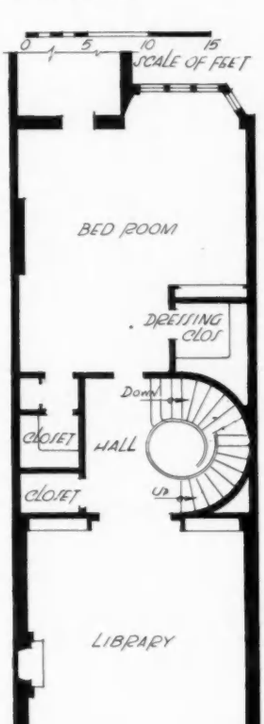
JAMES A. RANDALL, ARCHITECT



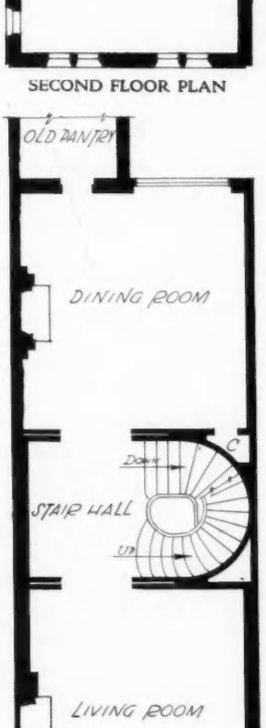
MAIN FLOOR PLAN AND GENERAL VIEW

EDWARD SMITH SCHOOL, SYRACUSE, N. Y.

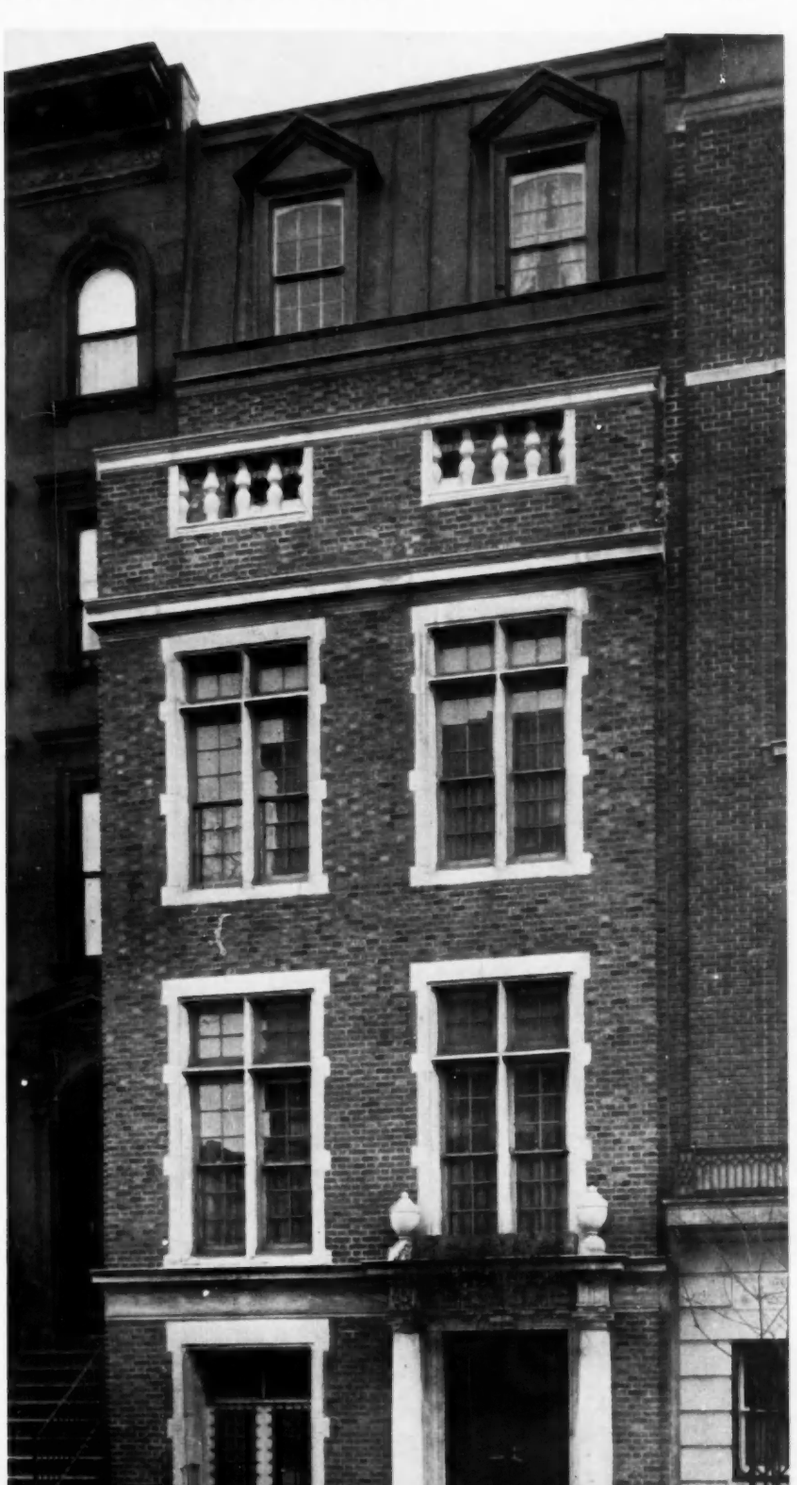
JAMES A. RANDALL, ARCHITECT



SECOND FLOOR PLAN



MAIN FLOOR PLAN

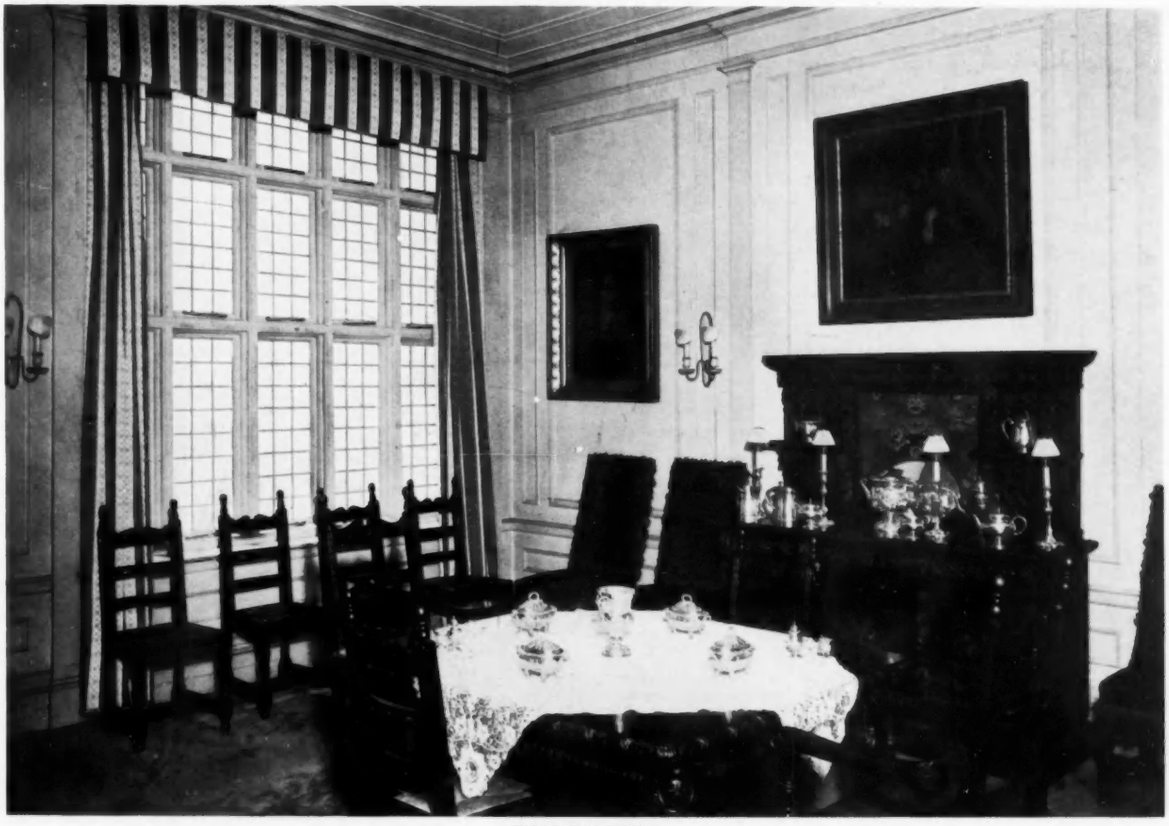


STREET FACADE

HOUSE OF A. LEO EVERETT, ESQ., 70TH STREET, NEW YORK, N. Y

WALKER & GILLETTE, ARCHITECTS

SECOND FLOOR BEDROOM



DINING ROOM

HOUSE OF A. LEO EVERETT, ESQ., 70TH STREET, NEW YORK, N. Y.

WALKER & GILLETTE, ARCHITECTS

DECORATION & FURNITURE

Jeanne Taylor, *Associate Editors*, Leland W. Lyon, R.A.

The Industrial Arts Exhibit at the Metropolitan Museum

NEW YORK, DEC. 15, 1920 TO JAN. 30, 1921

THE Metropolitan Museum of Art recently presented for public information an exhibit of furniture and decorations, consisting of stock reproductions and specially designed decorative fabrics based on originals from various collections at the Museum. With the co-operation of various manufacturers and dealers there were shown a number of types of period and modern furniture, tapestries, stained glass, screens and other decorative units of particular merit. A section of this exhibit is illustrated herewith.

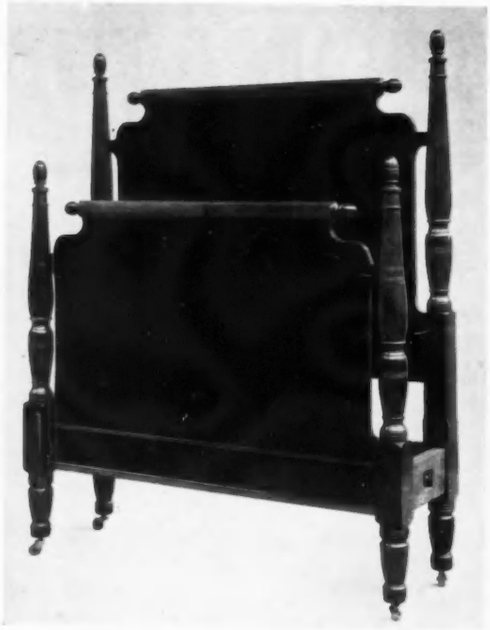
An exhibit of this nature should demonstrate the particular value of good collections of art objects which are made available for public information. Manufacturers, in following the well established precedents of recognized periods or in modernizing and combining the artistic elements of the furniture and decorations of past centuries and decades, are also performing a valuable public service. With this help even modest homes may be given distinction in furnishing and decoration.

We have already discussed the advisability of an increased interest on the part of architects in this subject of furnishing and decoration. With the realization of the availability of an infinite choice of reproductions and well designed modern furniture and decorative units, it is evident that the architect has directly at hand an unusual means of expression which should encourage him to complete his work of building design by indicating the furnishing of at least the principal rooms of structures of various types, and particularly of dwellings. It must be discouraging to an architect to design an attractive dwelling with rooms in which the interior architecture is of excellent taste, and see owners place in these rooms either chromos and relics of the past having no artistic merits, or purchasing unattractive modern types of furniture which ruin the entire

View in a Section of the Industrial Arts Exhibit at the Metropolitan Museum, New York

effect which the architect has so carefully planned.

During the past few weeks we have had occasion to inspect interior photographs of different dwellings designed by a number of architects. It has been found that where the architect has taken little or no interest in the question of furnishing, practically every interior has been spoiled by the owner unless he has been possessed of sufficient means to call in a decorator who may or may not have carried out a scheme in keeping with the architect's conception. Where the architect has made a practice of following his structural design with either service or general advice on the subject of furnishing, almost all interior views in his office prove to be attractive. It would seem evident, therefore, that the architect's policy has much to do with the ultimate result of his work, and that architects have it within their power to do much toward encouraging owners to furnish their homes sensibly and artistically.



An Adaptation of Early American Design in the Morgan Wing of the Museum

In many instances the owner of a new dwelling or building of almost every type turns to the architect for advice on furniture if he wishes advice; and the architect, in turn, has his choice of carrying out the work or advising as to the employment of an interior decorator who will work under his supervision or in co-operation with him. For the present there is no generally standardized method of handling the business phases of such a transaction. This seems to be entirely a matter of judgment on the part of the architect. This work may be carried on by charging for time, by commission arrangement similar to that under which building plans are prepared, or by special arrangement with the owner through which an amount equal to the discount allowed by some dealers may be paid to the architect for service.

An Italian Reproduction

An English Reproduction

From Original Furniture in the Collection of the Metropolitan Museum of Art

Interesting Rooms of a Remodeled Colonial Dwelling

WILLIAM JOHN CHERRY, ARCHITECT

IN the development of domestic architecture probably no period has created such a definite impression on the mind of the American public as that which has resulted from the work of the architects and craftsmen of the English colonies. In successive waves, during the past 30 or 40 years, we have turned to other periods for inspiration in the design of homes, but always there remains the impress of the colonial precedent, based as it is on the simplicity which was the spirit of the times—devoid of elaborate ornamentation but artistically true in line, mass, unity and proportions.

Thus it is that new dwelling designs of the so-called colonial period or any project involving the restoration of early American architecture meets with unusual interest, particularly if the designer has developed new features in restoration methods or a new and logical application of old ideas.

A Corner of the Dining Room

There are presented here several illustrations of interesting rooms in the recently remodeled colonial dwelling of E. M. Bull, at Blooming Grove, New York. This project is of particular interest in that the old estate was a direct grant from King George III and in the course of the alterations many of the fine old features of the house, built in 1804, have been preserved. The entrance hall is typical of the colonial period and the stairway is that of the original house and offers an interesting suggestion for modern planning in this period with its easy wind half way up.

View of Stair Hall

In the dining room the mantel with its lighting fixtures is of particular interest. The furnishings are of modern type, not colonial, but carefully chosen because of their graceful lines to form a harmonious composition. This room, while preserving colonial simplicity, has a more modern atmosphere than any other room of the house.

Other illustrations show views of a particularly interesting room; this is the study in which particular care was taken to create an atmosphere of comfort while still preserving the elements of the old colonial dwelling. Among the unusual features which the architect has incorporated in this design may be noted the use of weathered timbers and lumber

Fireplace in the Study

from an old barn, which was on the premises, to form the beamed ceiling of the room. These hand-hewn timbers are a weathered gray and have not been stained or painted but left in the natural condition, providing an unusually attractive result. The walls of this room were carefully hand plastered in imitation of old stone plaster and an interesting note is added by the preservation of the old andirons and other fireplace fittings. All the furniture used could be duplicated from stock. The pieces were selected for comfort and because of the low, broad lines so in keeping with this restoration of a room of the early American period.

The bookcases shown in one of the illustrations are made up with specially designed hardware. The glass in the doors is of the hand pressed type, originally imported, and was in old buildings on the premises. Various pieces were collected and built into leaded panels. On the floor is a braided rag rug such as may be had in various sizes, and its use goes far toward carrying out the type of furnishing which the architecture of the old house demands. In furnishing a house of any definite period it is wise to select pieces such as were used at that time, and many pieces based on old models may be had.

Old Leaded Glass in Bookcase and Windows of Study

BUSINESS & FINANCE

C. Stanley Taylor, *Associate Editor*

The Owner's Duty to the Architect

AT the present time practically every industry and every business is passing through a period of reconstruction. Old ways and methods pass. In the commercial world we have the long-heralded return to a buyers' market. Conservative financial institutions are developing and advertising the "service" resources of the financial world. In the architectural profession also a period of reconstruction is evident. As never before the value of sound business administration is recognized and its principles are being applied, not in a manner detrimental to the upholding of the dignity inherent to the profession but in a way which enables the architect to take his rightful place in the business world and to assume the responsibilities which broaden and become more intricate from year to year as the art or science of building progresses in almost unbelievable strides.

With intense interest and full appreciation of its value at this time we note the publication by the American Institute of Architects of a thorough treatise on business administration entitled "The Handbook of Architectural Practice." The opening paragraphs of the Handbook so clearly define and allocate business administration as an important factor that we quote briefly:

"It is as a fine art that architecture has established itself in the hearts of men. If it had been merely the science of building or even of building well, its appeal would not have brought to it minds such as those of Ictinus and Michael Angelo. To good building architecture adds high qualities of the imagination . . . but to treat of architecture as an art this Handbook does not aspire.

"The architect, though primarily an artist, must still be the master, either in himself or through others, of all the applied sciences necessary to sound and economic building . . . but it is not with construction nor engineering, nor with the choice of materials that this Handbook deals.

"The architect, by expressing his ideas in forms and words of exact contractual significance, by controlling machinery for their embodiment, by giving just decisions between conflicting interests, by bearing himself as worthy of his high calling, gives to his art the status of a profession. It is with that aspect of the architect's work, professional practice and its servant, *business administration*, that this Handbook is concerned."

Thus clearly does the Institute emphasize the importance of applying proper business methods and procedure in the conduct of the architect's affairs. Much has been said and more written on the subject of the architect's duty to the owner, but the owner's duty to the architect has never received sufficient consideration. In many instances the failure of the owner in this respect has led to direct financial loss or to the development of unnecessary misunderstandings and failure to establish that active co-operation so necessary for the successful completion of a building project. The "Handbook" expresses full realization of this fact. It is the purpose of this article, however, to correlate suggestions made therein and to add such facts as may have been gathered through experience and contact with various architectural projects and organizations.

Realizing What the Architect Does

The first duty of an owner who is about to engage an architect is to learn fully what is included under the term "architectural service." The American Institute of Architects thus defines the professional services of the architect:

"Necessary conferences; the preparation of preliminary studies (sketch plans and reports); working drawings; specifications; large scale and full size detail drawings; the drafting of forms of proposals and contracts; the issuance of certificates of payment; the keeping of accounts; the general administration of the business and supervision of the work."

It is evident therefore that the work of the architect is far more than that of an artist, and that in paying the fees charged by architects the owner is paying not only for design but for a vast amount of detailed work involving every part of the building and its equipment; cost estimates; arrangements with contractors; accounting and numerous other activities involving a high degree of skill and special knowledge.

An owner will do well also to realize that the architect's fee is not all profit nor are his expenses on a project trivial in nature. What proportion of an architect's fee is profit depends entirely on the volume of his business and his organization methods but we venture the assertion that the average net profit on architectural work is less than that of the

real estate broker who may sell or lease the building after it is finished. Full information as to standard charges and documents may be obtained from the American Institute of Architects or by addressing the Editor of THE ARCHITECTURAL FORUM. It is important therefore that the architect should explain to an owner the full nature of his work in order that understanding may be clear on this point.

A Definite Agreement before Work Progresses

We may pass briefly over the point of selecting the architect. This is done by the owner either as he would select a lawyer or a doctor, by competition, or because some architectural organization actually "sells" its service to him. The important point is that the owner should be satisfied before closing an agreement that the architect he has selected is capable of carrying out the work to his satisfaction. "Swapping horses in midstream" is the poorest kind of policy in connection with a building operation and is always expensive to the owner.

An architect is entirely within his rights in requiring a definite written agreement before he starts work on the design of a building of any type. This is simple and sound business practice and it is the owner's duty to sign such an agreement for his own protection. The agreement need not bind the owner to proceed with the building operation, but it should:

1 — Definitely employ the architect to carry out such work as may be authorized in writing by the owner from time to time.

2 — Specify the amount and method of payment for architectural service (*a*) As the work proceeds; (*b*) If project is abandoned.

Note. See standard form of agreement between owner and architect prepared by American Institute of Architects.

3 — Define such expenses as may be reimbursed to the architect by the owner: travel, special engineering service, etc.

At the present time many projects are undertaken by architects without any definite agreement of legal value. Much misunderstanding results from this condition. The architect who insists on an agreement shows only good business judgment which in turn will prove of benefit to his client.

A Clear Understanding of the Project

When a client takes a case to his lawyer, or when a doctor is called in to prescribe for illness, every possible fact and condition is presented in order that this professional service may be successful in its application to the immediate problem. Similarly, when an owner calls upon an architect to undertake the solution of a building problem it is his duty to acquaint the architect with all possible details which may affect the design and construction.

Unless an owner has special knowledge of the subject he should not interfere with the artistic elements of the design. This is one of the problems which he presents to the architect, who presumably has more knowledge of the subject. The owner should think of his proposed building more as a machine than a work of art. The architect will provide the artistic elements, but he cannot guess at the actual functioning of the machine as required by the owner. Whether it be a dwelling, hotel, office building or factory, it is the duty of the owner to outline completely his major requirements before sketch plans are made, and to have these clearly in mind as he studies the preliminary drawings and the working drawings as the architect's work proceeds.

This is a point which cannot be too strongly stressed. The wise owner will therefore enter into the work of the architect in a spirit of co-operation. For the time being they are business partners, mutually interested in achieving the best results obtainable. Consequently there should be no hesitation on the owner's part in calling into consultation any of his associates, employes or special technical advisers who may be directly interested in the functioning of the building *after* it is completed. The architect cannot be fairly expected to know the details of every business or menage. He is expected to know how to translate these requirements into building terms and plans after he is made aware of them and to seek (at the owner's expense and with his permission) advice on such highly technical details as may not lie directly within his province.

Necessity of Co-operation

If the building in question is a hotel, it is the owner's duty to call for advice from those who will actually manage or lease it upon completion. In the case of an office building the rental agents or building managers should be called upon to approve the plans while in preliminary form. This idea extends to all types of service buildings including even the larger residences.

The architect, therefore, should recognize this as a duty which the owner owes to him. If he does not do so there may be several unpleasant results. The plans after completion may reach an associate of the owner who because of his relation to the project may severely and justly criticise details expensive to alter. In an investment project the managers or real estate brokers may, as they have in thousands of cases, point out costly mistakes in planning after the building is completed and blame the architect with consequent injury to his reputation. So too the owner's refusal to allow the architect to call in special engineering advisers on important problems may prove expensive in the end. It is the owner's duty to expect neither superhuman knowledge nor achievement from the architect and to realize that the architect's advice on the employment of consulting service is not given if such

service can properly be expected as part of his organization equipment. On the other hand it is fair for the architect to advise the owner in advance (or when preliminary plans are completed) what special consulting service will be necessary.

Duties of the Owner

As to the provision of all facts and conditions affecting the land involved in a given project, this is the duty of the owner. We may turn to the Handbook for definite advice in this matter:

"The owner shall furnish the architect with a complete and accurate survey of the building site, giving the grades and lines of streets, pavements and adjoining properties; the rights, restrictions, easements, boundaries and contours of the building site, and full information as to sewer, water, gas and electrical service.

"Many instances of trouble and expense due to the failure of the owner to furnish complete and accurate information might be cited, but one will suffice. In a recent case the owner furnished the architect with a survey covering all the usual data and such restrictions as were *of record*. The property, however, did not belong to the company erecting the building, but had been leased in three parcels for 99 years. The leases had not been recorded. They provided that in the event of the improvement of any parcel in conjunction with another the columns were to be so located on the dividing line as to form "party columns." The architect prepared sketches and working drawings in ignorance of these restrictions and it was not until the contract had been awarded that he was casually notified that the columns must conform to the lines of the several parcels. The owner had to bear the cost of re-making the drawings, $5,000, and of the necessary changes in the building, $84,000."

The architect, of course, is responsible for making certain that the design and all details of plan are in accordance with all building laws, codes and departmental rulings having application to the location in question.

The Question of Cost Estimates

One of the contact points at which most of the misunderstanding between owners and architects is started is to be found in this question of preliminary and detailed cost estimates. Usually an owner has clearly in mind the amount of money which he is able and willing to spend on a project and it is his duty to inform the architect definitely on this matter rather than to approach the subject vaguely. On the other hand, it should be more generally realized by architects that in regard to this question of cost the owner is almost entirely dependent upon the architect.

During the past few years it has been unusually difficult to estimate costs owing to the disturbed condition of the labor and material markets. Perhaps it will be found, however, that many architects have made cost estimates without sufficient care. Certainly a great many owners have been disappointed in the comparison of ultimate costs with estimated costs, and in many cases part of the fault may be charged to the architect.

When an architect is commissioned to draw the plans for a building and has received from an owner an approximate figure as to the cost which he is willing to bear, it is the duty of the architect to gather all possible information on recent costs of buildings of this type, not relying entirely on experience in his own office unless it has been extensive, but seeking advice of builders and other architects who have designed structures of a similar nature. The owner, however, should realize that owing to the conditions which have been referred to there may be considerable difference in the architect's estimate and the contractor's bid (the ultimate cost of the work) due to conditions beyond the control of the architect, such as transportation difficulties, labor troubles and other expensive delays, as well as to the failure of material dealers and sub-contractors to live up to contracts and agreements, an experience common under present conditions. The owner should consider carefully the nature of the building market and realize that the architect is trying to give the best possible service.

Importance of Preliminary Figures

There have been cases where architects have given preliminary estimates much too low which have had every appearance of attempts to encourage construction. This policy, which is both dishonest and unbusinesslike, is always attended by unfortunate results, and the profit which may be made through such an operation is more than lost in damaged reputation and unpleasant advertising. Cases of this type are few and it will invariably be found the best policy to apprise the owner fully of all facts and conditions relative to the cost. In making estimates both the architect and the owner should allow a liberal safety factor to cover unexpected costs. In this matter the owner can do much toward co-operating with the architect if he will but take an intelligent interest in the subject such as is warranted by its importance to him, and allow the architect any necessary preliminary expenditures which may be required to develop dependable cost estimates.

In this connection we may note the fact that there will be published occasionally in the Service Section of THE ARCHITECTURAL FORUM a tabulation of cubic foot costs of various types of buildings in different sections of the country which is intended to serve as a guide to architects in making preliminary estimates for sketch plans or, inversely, in determining the approximate allowable number of cubic feet in accordance with the amount of money which the owner is willing to spend on a project under consideration.

As the Work Proceeds

The owner, for the protection of his own interests, should follow all important points brought out in working drawings and specifications as the plans are being developed. It is not difficult to follow these details with the architect's explanation and the owner will be in a position to know exactly what materials, methods, equipment and details of planning will be incorporated in his building before it is constructed. By following these matters closely and by visualizing in a practical manner, the owner may prevent results which are not satisfactory to him. This is an important point as the owner is called upon to approve all working drawings and specifications, and such approval applies to every detail indicated therein. It is unfair to the architect for an owner to criticise important details of finished work if the owner has not given fair consideration to the plans while in the stage of development. If it necessitates models to carry a preliminary point, their secondary function is to eliminate future differences.

It is self evident that another of the owner's duties is to carry on all business relative to the equipment and construction of the building, through the architect. There have been many instances of an owner negotiating direct for the construction of a building or on sub-contracts, issuing orders on the job or in other ways interfering with the regular schedule of the work. Sub-contractors and others who may have arranged definite agreements through the architect are naturally placed in a position to charge for extras, ordered by the owner, and any issuing of contradictory orders or approval in changes of plans and specifications by the owner tends to confuse the issue and to increase building costs.

This does not mean that the owner should not examine the job as it progresses or that he is precluded from finding fault with conditions which do not meet with his approval; but it is his duty to carry out all changes and to make all complaints to and through the architect rather than directly in contact with builder, sub-contractor or supply dealers.

In arranging building and sub-contracts the owner will find that he has much to gain by keeping somewhat in the background and in carrying on negotiations through the architect. In one sense this situation is similar to that of a real estate transaction where the principals do business through brokers who are in a better position to negotiate and to know when the principals should be brought together.

The Architect's Responsibility

If the contract is to be let on a service basis (cost plus a fixed fee), the architect's duties and responsibilities are greatly increased. Similarly, if the project is carried on through the letting of several contracts for various parts of the work the architect practically occupies a position of general contractor, in which case his fee and expenses will naturally be increased. If the work is let on a straight contract basis it is well for the owner to realize that the lowest bid may not be the best bid, and that the architect's opinion, gained through inquiry as to the work of various contractors, or through knowledge of their work, is of importance. Many owners make the fatal mistake of insisting on bringing in contractors, met through a social or business relationship, who may not be well fitted by experience or knowledge to carry out the type of work involved.

There are, of course, many instances which arise as the work progresses in which the owner may show a fair minded spirit which will be appreciated by the builder and by the architect. The owner must realize also that as between the building contractor and himself the architect is really an arbitrator whose duty it is to see that the various agreements are carried out in fairness to both parties and who will not hesitate to tell the owner that he has taken an unfair position if this be true. Therefore, the owner must not expect the architect to exhibit any false loyalty in dealings with the contractor and sub-contractors. The owner should realize also the importance of making all payments when and as agreed and that if this is not done the architect is placed in a difficult position, expensive delays often developing as the result of any slow payment policy.

It is evident that the owner who fully realizes his duties and who strives to develop and maintain the proper spirit of co-operation with the architect has much to gain. It is very difficult for an architect to work enthusiastically if he is forced to worry about the attitude of the owner. It may be readily understood that without enthusiasm an architect cannot do his best work.

For the period during which the structure is being planned and built the architect is in practically every sense a business partner of the owner. He is working for the same results, and if the owner will but consider his duties as the duties of one associate to another he will not only fully appreciate the work and responsibility of the architect, but he will do much toward expediting the work and guaranteeing his own satisfaction.

PLATE DESCRIPTION

MEMORIAL TABLET TO JOHN PIERPONT MORGAN. PLATE 21. Against the northwest pier supporting the central dome of the main hall of the Metropolitan Museum has been recently erected a sculptured tablet in memory of the late President of the Museum. In 1914, shortly after Mr. Morgan's death, this important commission was entrusted by the Trustees to Paul Manship, sculptor, and upon its execution he has spent the last six years. The memorial tablet takes the form of a stone slab, 11 feet 2 inches in height by 5 feet 4 inches in width, with a projection from the wall of 6½ inches. Champville stone, which comes from France, has been used. This material, which belongs to the limestone family, possesses a fine grain and lends itself well to detailed sculpture in relief.

HOUSE OF A. LEO EVERETT, ESQ., 70TH STREET, NEW YORK, N. Y. PLATES 31, 32. Many of the most successful alterations of city houses involve the removal of old fashioned high stoops and the placing of the new main entrances upon what was previously the basement level. The advantage of this, as is well known, is that it makes possible a dignified entrance, using valuable space which was often practically wasted, and leaves the entire width of the building upon the front of the main floor available for a drawing room or a living room. The residence shown here, of which Walker & Gillette are the architects, is an interesting case of this kind. A new facade nearer the sidewalk gives ample hallway and the removal of old partitions has given opportunity for spacious stair hall, living and dining rooms upon the main floor, and for a library and a master's bedroom, the full width of the house, upon the floor above.

The design of the facade has been worked out with brick laid in Flemish bond, with trim of limestone and sheet metal for the uppermost floor.

HOUSE OF REV. WILLIAM M. CRANE, RICHMOND, MASS. PLATES 25, 26. This residence in the Berkshire Hills shows an advantageous use of plastic materials, cream gray stucco on terra cotta block having been used for the walls of the structure, reinforced concrete for foundations and for the retaining walls of pergola and terrace, and red Spanish tiles for the roofs, while the floors of vestibule, loggia, stair hall and pergola are laid with dark red domestic tiles. One interesting detail of planning is the placing by the architects, Kilham & Hopkins, of all the service rooms in one part of the building where pantry, kitchen, servants' dining room and four sleeping rooms, with a bathroom, are installed upon the main floor which makes the entire upper floor available for the family and guests.

BUILDING FOR C. C. WHITTEMORE, CATERER, BOSTON, MASS. PLATE 28. This structure, of which Allen & Collens and J. Lawrence Berry are architects, was carefully planned for the exclusive use of a caterer and the result is a building which includes every convenience. Since show windows, in this instance, are neither necessary nor desirable, the facade has been given a treatment which does not suggest a shop. Cast stone is the material used with rondels of verde antique marble at the sides of the Palladian window which is the dominating architectural feature of the front.

Plans show a main floor arranged for the business of a caterer while the entire second floor is given up to bakery and kitchen, well equipped with refrigerator, ovens, sinks and other necessary details and connected by lifts with the ice cream department in the basement. Here every possible provision has been made for efficient service and this department is equipped with refrigerators, ice cracking machine, salt bin, mixing bin, steam kettle, mould room and freezing machinery and complete facilities for prompt delivery service.

JEFFERSON SCHOOL, SYRACUSE, N. Y. PLATE 29. In this building, planned by James A. Randall, architect, considerable attention has been paid to providing complete equipment in a school of moderate size. The plates show an exterior of brick, simple and direct, two full stories and basement in height. Upon the basement floor are placed two sets of playrooms, lockers and toilets, one for boys and another for girls, with the necessary showers and boiler room and a fan room to provide adequate ventilation. Besides a large kindergarten room there are nine class rooms, a clinic, a rest room for teachers, office and reception room for principal, and a large auditorium and gymnasium the height of two full stories.

The class rooms, it will be noted, are so planned that light falls upon the students' desks from the left. This school will accommodate 400 pupils and was built during 1917 and 1918 at a cost of $147,950 which included complete furnishings.

EDWARD SMITH SCHOOL, SYRACUSE, N. Y. PLATE 30. An unusually large plot in a new district afforded the architect, James A. Randall, an opportunity of planning a school of fair size upon one floor. Here there are 12 class rooms besides auditorium and gymnasium, kindergarten, rooms for manual training, sewing and domestic science, fresh air room with porch and such conveniences as teachers' rest room and offices for medical director and principal.

All of these departments being on one floor, the architect has placed the large open space of the auditorium and gymnasium at the center of the building with class rooms grouped around it, thus minimizing the extent of corridors, otherwise necessary in a building covering such large area. The boiler room is placed in the part of the building least valuable for other purposes. The school presents a pleasing appearance and is built of brick with certain parts coated with stucco. It provides for 550 pupils and was built during 1917 and 1918 at a cost, entirely furnished, of $203,000.

EDITORIAL COMMENT

ARCHITECTS AND ORGANIZATION

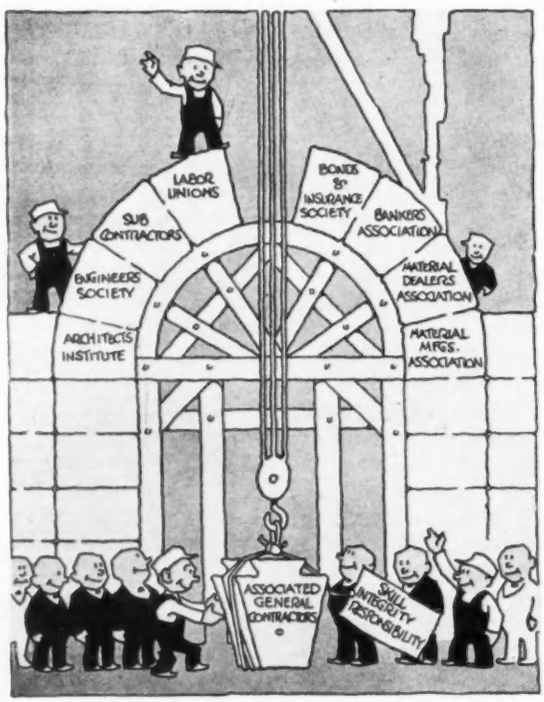
THE value of organization was demonstrated beyond question during the war and it is, therefore, to be counted a real and active factor in our present social, business and professional affairs. Without it little can be effectively carried out where the interests of a group are involved. Organization, unfortunately, may at times be wrongly used; we have seen as the result of various investigations the power that organization may exert to the detriment of the public when that power is used in a business sense to restrict competition and production and to fix prices. The existence of organizations that are inimical to public interests does not, however, condemn the organization idea; it merely indicates that group action is a present day factor and that organizations with evil intent must be opposed by other organizations guided by higher principles.

The practice of architecture presents an example where organized effort is eminently desirable and necessary. Architects constitute a profession that holds the highest ideals of service to the public; their ethics, unfortunately, are not generally understood or appreciated by the public at large and without proper explanation wrong conceptions of the architect's function and service are inevitably formed. The movement for licensing the practice of architecture creates a condition in which the individual architect has little opportunity to express approval or disapproval on a matter of vital importance to his welfare. These and many other reasons make the association of architects necessary, if only from the viewpoint of protecting professional status.

Architects have, however, a larger incentive for association. It is the advancement of architecture as a fine art. Upon this ideal the American Institute of Architects was founded many years ago when the profession in this country was in the early stages of development. The unselfish, high principled ideals built into the Institute by its founders have assured its continued growth and it presents today a firm foundation upon which a really great Institute should be raised.

A greater Institute is not suggested in any criticism of past efforts for one has only to reflect on the practice of architecture today and conjecture what conditions might be with respect to competitions, professional fees and the code of professional ethics were it not for the work of the Institute, to realize its worth. New problems, however, continually arise that demand careful and deliberate thought and we should not rest content with past endeavors. In these days of reconstruction influences are at work that will require of the Institute greater activities in the future than in the past. These activities will be in scope and effectiveness in proportion to the support accorded the Institute by the profession.

The effectiveness and prestige of an organization may be judged by the measure of recognition accorded it by others. It is of interest to note, therefore, in the cartoon reproduced below, the relative position accorded the Institute by one of the newest organizations to be established within the building industry. This appeared in *The Bulletin of the Associated General Contractors* for January, 1921 and indicates the function which this new organization, scarcely two years old, feels called upon to fill. If it appears that a dominant organization is lacking in the building industry credit only must be given those who seek to eliminate the deficiency. We believe, however, that the Institute should represent to the building industry generally a higher importance than this cartoon accords it. It has the dignity and impressiveness of age back of it; it is composed of men who should be by nature of their profession the acknowledged leaders of the construction world. Still, something is lacking; it does not function in the public eye as it should.



The reason is not far to seek; the Institute, while representative of the profession in a general sense, does not represent the whole body of architects because its members are only a minority of practicing architects. It should be made truly representative so that it may have the support to which it is entitled; and it can be made truly representative only if every architect makes the welfare of his profession a matter of personal interest.

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